Report On The Health
Of British Columbians
Provincial Health Officer's
Annual Report 2001

# The Health and Well-being of Aboriginal People in British Columbia

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Ministry of Health Planning
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### Report On The Health
### Of British Columbians
### Provincial Health Officer's
### Annual Report 2001

# The Health and Well-being of Aboriginal People in British Columbia

BRITISH COLUMBIA
Ministry of Health Planning
Office of the
Provincial Health Officer

Ministry of Health Planning
Victoria, B.C.

October 28, 2002

The Honourable Sindi Hawkins
Minister of Health Planning

Madam:

I have the honour of submitting the Provincial Health Officer's Annual Report for 2001.

P.R.W. Kendall, MBBS, MSc, FRCPC
Provincial Health Officer

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# Executive Summary

The *Provincial Health Officer's Annual Report 2001* provides an update on British Columbia's progress toward the goal of improved health for Aboriginal people. The report was developed over a two-year period, with input and assistance from the Provincial Aboriginal Health Services Strategy Steering Committee, other Aboriginal groups and organizations, and others involved in the Aboriginal health field.

The statistics in this report have been drawn from a variety of published and unpublished sources. Sixty indicators are used to describe health status, community environments, healthy growth and development, the physical environment, health services, and disease and injury prevention. Where possible, both provincial and regional data are presented, along with information to support development of specific objectives and targets for improvement. Definitions, data sources, and an explanation of each of the indicators may be found in Appendix C. Appendix E contains regional data, available for 32 of the 60 indicators, in tables and figures. Throughout the report, there are examples of programs and strategies that are innovative and effective in improving the health of Aboriginal people, in British Columbia or elsewhere in the world.

Aboriginal people are the descendants of the original inhabitants of North America. There are different concepts of "Aboriginality" based on ancestry, identity with Aboriginal groups, and legal status. Many of the available statistics pertain to specific Aboriginal groups, particularly Status (Registered) Indians. When referring to statistics or legislation, this report uses the terminology appropriate to each set of data, e.g., Status Indian, First Nations on reserve, or Aboriginal, so that readers will know which population group is covered. The term "Aboriginal" is used when data are inclusive of First Nations, Inuit, and Métis people or when available data are used to make inferences about Aboriginal peoples as a whole.

## Findings

If you are an Aboriginal person living in British Columbia, your standard of living is likely to be 20 per cent below the provincial average, based on measures such as income, employment, educational attainment, and housing adequacy. Think of any disease or health condition – from diabetes, pneumonia, or HIV/AIDS to injuries caused by a motor vehicle crash – and your chance of experiencing it will be greater than your non-Aboriginal counterparts. As a result, if you are a Status Indian, you can expect to live 7.5 years less than other British Columbians (life expectancy estimates are not available for Aboriginal people other than Status Indians). These facts are certainly not new. They describe a well-known and longstanding inequality in health and social status – an inequality that affects indigenous people in Canada and around the world.

Many statistics about the Aboriginal population are grim, yet this report is not a litany of grief. The data show that over the past few decades, there has been a huge recovery in the health status of Aboriginal people. For infant mortality, unintentional injuries, suicide, and most other major causes of death, death rates are improving steadily, often at a rate of improvement that exceeds the provincial average. If 1990s trends continue, Status Indians (the only Aboriginal group for which death statistics are available) could achieve a level of health comparable to other British Columbians some time during the next decade. This improvement has occurred in spite of having only 80 per cent of the standard of living enjoyed by other British Columbians. These huge gains in health speak to:

- the extraordinary resilience and capacities of Aboriginal peoples;
- cultural and political resurgence; and,
- the success of targeted programs and services and some improvements in socio-economic conditions (housing on reserve, educational attainment).

Of the 60 measures discussed in the report, 20 show an improving trend (or are already at a very low rate). Seven indicators have not shown much, if any, improvement, and three are worsening. Regrettably, trend data are not available for many (25) of the indicators. Five indicators that describe usage of doctors, hospitals, and other health care services are not included in the summary table on the following pages. This is because we do not know what direction of movement would constitute an improving trend. (See Appendix D for comparisons between Aboriginal and other British Columbians on selected indicators.)

The health and well-being of Aboriginal people varies across British Columbia. The northern and Interior regions of North West, Peace Liard, Okanagan Similkameen, and Thompson have the best health status, based on Status Indian life expectancy, infant mortality, and rates of premature death. Vancouver and Simon Fraser regions have the poorest health, based on these particular measures. This differs from the north-south pattern among other B.C. residents, which show higher levels of health in the southern part of the province. This does not mean that it is unhealthy for Aboriginal people to grow and live in Vancouver, Simon Fraser, or elsewhere, but only that these regions are facing particular health problems. Vancouver's ranking, for example, is affected by the number of people who have moved to its inner city neighbourhoods from other parts of British Columbia and Canada.

For the Aboriginal population, a region's health status does not seem to be clearly linked to socioeconomic conditions, based on Census data on employment, income, and educational attainment. North West, Peace Liard, Okanagan Similkameen, and Thompson regions, which have the best health status rankings, are at or below average in terms of socioeconomic measures. The lack of a relationship between socioeconomic conditions and health could be due to problems with data quality and/or problems with the measures used.

Aboriginal people receive health services through a unique combination of federal, provincial, and Aboriginal-run programs and services. For Aboriginal people, ongoing federal/provincial jurisdictional and funding issues have created gaps and inadequacies in health services. Improved access, greater Aboriginal control and involvement, and improved working relationships with the health system are some of the needs that have been recognized.

British Columbia's health authorities are in the midst of creating Aboriginal health plans that identify and address Aboriginal health service priorities for their regions. The Provincial Health Officer hopes that this report will be useful to health authorities as they finalize their goals, objectives, priority actions, and evaluation plans.

**Progress Toward Aboriginal Health and Well-being**

| Indicator | Trend | Population for which data are available |
|---|---|---|
| **Health Status** | | |
| Progress in community wellness | Trend not available | First Nations on reserve |
| Self-rated health | Trend not available | Aboriginal (self-identified);<br>First Nations on reserve |
| Life expectancy | Improving | Status Indians |
| Chronic conditions | Trend not available | Aboriginal (self-identified);<br>First Nations on reserve |
| Infant mortality | Improving | Status Indians |
| Potential Years of Life Lost | Improving | Status Indians |
| Mortality rate | Improving | Status Indians |
| **Community Environments** | | |
| Employment rate | Trend not available | Aboriginal (self-identified) |
| Employment to population ratio | Trend not available | Aboriginal (self-identified) |
| Average employment income | Trend not available | Aboriginal (self-identified) |
| Income self-sufficiency | Trend not available | Aboriginal (self-identified) |
| Children in low-income families | Trend not available | Aboriginal (self-identified) |
| High school graduation | Improving | Aboriginal (self-identified) |
| Post-secondary graduation | Trend not available | Aboriginal (self-identified) |
| Disparity in socioeconomic conditions | Trend not available | Aboriginal (self-identified) |
| Community control over health and social services | Improving | First Nations on reserve |
| Aboriginal children in care (as a per cent of all children in care) | Worsening | Aboriginal (as identified in caseload statistics) |
| Youth in justice institutions | Not much change | Aboriginal (as identified in caseload statistics) |
| **Healthy Growth and Development** | | |
| Low birthweight | Not much change | Status Indians |
| Pre-term births | Not much change | Status Indians |
| Post neonatal mortality | Improving | Status Indians |
| Teen pregnancy rate | Improving | Status Indians |
| School completion rate | Improving | Aboriginal (self-identified) |
| Foundation Skills Assessment scores | Trend not available | Aboriginal (self-identified) |
| Average GPA | Improving | Aboriginal (self-identified) |
| Smoking rate | Trend not available | Aboriginal (self-identified) |
| Binge drinking | Trend not available | Aboriginal (self-identified) |
| Family connectedness | Trend not available | Aboriginal (self-identified) |
| School connectedness | Trend not available | Aboriginal (self-identified) |

### Progress Toward Aboriginal Health and Well-being

| Indicator | Trend | Population for which data are available |
|---|---|---|
| **Physical Environment** | | |
| Housing quality | Improving | First Nations on reserve |
| Housing need | Trend not available | Aboriginal (self-identified) |
| Community services | Improving | First Nations on reserve |
| Exposure to second-hand smoke | Trend not available | Aboriginal (self-identified) |
| Drinking water quality | Improving | First Nations on reserve |
| Mercury levels | Very low rate | First Nations communities |
| Progress in relationship to the land | Trend not available | First Nations on reserve |
| **Health Services** | | |
| Childhood immunization | Not much change | First Nations on reserve |
| Pap smears | Trend not available | Status Indians |
| Screening mammography | Trend not available | Aboriginal (self-identified) |
| Preventable admissions | Improving | Status Indians |
| Children's dental procedures | Not much change | Status Indians |
| Tranquilizer and sleeping pill use | Trend not available | Status Indians |
| Antibiotic prescribing | Trend not available | Status Indians |
| Community follow-up of mental health admissions | Not much change | Status Indians |
| Aboriginal representation in health professions | Trend not available | Aboriginal (self-identified) |
| **Disease and Injury Prevention** | | |
| Diabetes | Trend not available | Aboriginal (self-identified);<br>First Nations on reserve |
| Arthritis hospitalizations | Not much change | Status Indians |
| Disability rate | Trend not available | Aboriginal (self-identified);<br>First Nations on reserve |
| Smoking-attributable deaths | Improving | Status Indians |
| Alcohol-related deaths | Worsening | Status Indians |
| HIV/AIDS deaths | Worsening | Status Indians |
| Tuberculosis cases | Improving | Status Indians |
| Unintentional injury deaths | Improving | Status Indians |
| Suicide deaths | Improving | Status Indians |
| Drug-induced deaths | Improving | Status Indians |

Improving or already at a very low rate: 20 indicators. Not much change: 7 indicators.

Worsening: 3 indicators. Trend not available: 25 indicators. Total indicators: 55.

5 indicators that describe usage of doctors, hospitals, and other health care services are not included in this table, because we do not know what direction of movement would constitute an improving trend.

### Progress Toward Aboriginal Health and Well-being

| Indicator | Trend | Population for which data are available |
|---|---|---|
| | **Physical Environment** | |
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| Housing need | Trend not available | Aboriginal (self-identified) |
| Community services | Improving | First Nations on reserve |
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Improving or already at a very low rate: 20 indicators. Not much change: 7 indicators.

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## Solutions

What do we need to do to hasten the pace of improvements in the health and well-being of Aboriginal peoples? As in other reports from the Provincial Health Officer, we must conclude that simply providing more money for health care, more health care workers or more hospitals is not the answer. For one thing, Aboriginal health status seems to be highest in the northern areas of the province, where income levels are lower and formal health care services are less available. The lowest Aboriginal health status is found in Vancouver, where major hospitals and other services are more plentiful. Furthermore, the data show that Status Indians are using the health care system at rates equal to or greater than the average British Columbian, at least in terms of physician visits and admissions to hospital.

Many Aboriginal organizations provided input throughout the development of this report. Formal commitments, more recognition, a more holistic approach, more autonomy, and more representation were solutions suggested during the Provincial Health Officer's consultations. B.C. data and evidence from other jurisdictions support those six approaches. General recommendations from this report are as follows:

Formal commitments

- Establish provincial and regional targets for achieving comparable health status between the Aboriginal population and other British Columbians or specific Aboriginal targets, where appropriate. Hold ministries and health authorities accountable for progress toward those targets and for coordination with agencies that serve the same populations.

Improved standard of living

- Work collaboratively to improve housing conditions and economic and educational opportunities for Aboriginal people.

More recognition and respect

- Increase awareness of the health status of Aboriginal people and the health issues and challenges that Aboriginal people face.

More holistic approach

- Pay more attention to the non-medical, cultural, and spiritual determinants of health.
- Encourage participatory research to gain a clearer understanding as to why some Aboriginal communities are "healthier" than others.
- Identify and collect indicators that are meaningful and useful to Aboriginal communities. Perceived progress in a return to traditional ways, personal commitment to healing, housing quality, and employment opportunities are some examples from the B.C. First Nations Regional Health Survey that could be used as a starting point.

More autonomy

- Support efforts by Aboriginal people to achieve self-determination and a collective sense of control over their futures, in both on- and off-reserve communities.

More representation

- Encourage greater Aboriginal participation in health governance and in the design and delivery of culturally-appropriate health services.

## Specific Areas for Health Authority Action

This report provides more than 40 examples of actions that can be taken to make continued improvements in the health of Aboriginal people in British Columbia. In the Provincial Health Officer's view, there are eight areas where the greatest health gains can be made. This can be done by targeting strategic initiatives and building on the gradual improvements in Aboriginal health over the past decades.

- Early childhood development. SIDS rates showed a steep decline during the 1990s, especially among Status Indian babies. As a result, Status Indian infant mortality rates have nearly reached the low rate experienced by the general population. This represents a major achievement. These improvements can be sustained, in part, by reducing exposure to tobacco smoke, continuing to provide SIDS prevention activities, introducing a pneumococcal vaccine program, and improvements to primary care. At the same time, efforts should be directed to the promotion of healthy growth and development during early childhood – the period from birth through age 5.
- Tobacco. Smoking rates are high (45 per cent) among the Aboriginal population – about twice the rate in the general population (23 per cent). Major efforts are under way to reduce the use of tobacco in British Columbia. Education programs, cessation services, and community awareness activities aimed at Aboriginal youth and families should assist Aboriginal communities to bring down their high rates of smoking and smoking-related illnesses.
- Alcohol and drugs. Alcohol and illicit drugs continue to take a huge toll on the lives and health of the Aboriginal population, in spite of resources being devoted to these problem areas. Like other high-risk behaviours, alcohol and drug misuse reflects social and cultural stresses, which impact people's ability to cope with life in healthy ways. Alcohol and drug problems can only be solved through comprehensive efforts addressing predisposing social conditions, prevention and treatment of substance abuse, and reduction of harms that accrue when prevention and treatment fail. British Columbia should boost and enhance community programs such as the Four Pillars Approach in Vancouver, with a focus on culture-based services specific to the Aboriginal population.
- HIV. Death rates due to HIV/AIDS are increasing among Status Indians, while rates in the general population are declining. This is one of the few causes of death where the health status gap is widening. British Columbia has one of the most comprehensive HIV/AIDS programs in Canada, but improvements are possible when it comes to reaching the Aboriginal population and other vulnerable groups. *The Red Road*, an Aboriginal strategy for HIV and AIDS in B.C., made 50 recommendations to address Aboriginal HIV/AIDS. The response to these recommendations should be strengthened and implemented.
- Diabetes. Diabetes is a critical issue in Aboriginal communities. A national Aboriginal Diabetes Initiative is under way to prevent diabetes and to manage the disease better through improvements to treatment and care. Diabetes can be prevented, or its onset delayed, through healthy eating, maintaining a healthy body weight, and increased physical activity. Children and youth are important groups to target for promotion of healthy eating and physically active lifestyles, in order to slow the numbers with diabetes in future generations.

- Injuries. Injuries are the most common cause of death for Aboriginal people. Injury death rates among Status Indians fell dramatically – more than 50 per cent – in the 1990s. However, death rates from injuries remain high, accounting for more than one-quarter of all Status Indian deaths and more than 40 per cent of Potential Years of Life Lost. Motor vehicle crashes, accidental poisoning (which includes drug overdose deaths), suicide, falls, fires, and drowning are the leading causes of injury death. Almost all injuries are preventable. For example, road conditions, behaviours regarding alcohol and seatbelt use, enforcement of speeding and traffic laws, and access to emergency care are some of the factors that can be changed to reduce motor vehicle injuries. Injury prevention plans can be developed to address these factors at the community level.
- Primary care. Most (83 per cent) Status Indians visit a doctor or other health practitioner in a given year, compared to 87 per cent for the rest of the population. Available data provide a glimpse at overall utilization, but they do not tell us whether Aboriginal people are receiving the services they need. We have indications (higher rates of admission for preventable conditions, lower referral rates after admission for psychiatric reasons) that primary care services for aboriginal communities may be less than optimal. British Columbia needs better information about the quality and outcomes of health services provided, so that equity in outcomes can be targeted. The province should also seek better information about Aboriginal peoples' preferences for home and residential care. Universities and colleges are striving to increase the number of Aboriginal students enrolled in the health care professions, and these efforts should be encouraged.
- Information. Without the ability to measure, we cannot be sure that things are getting better. Currently there is a patchwork of information. We know the most about the Status Indian population – roughly two-thirds of the Aboriginal population. Birth and death-related statistics in this report are for Status Indians on and off-reserve combined. A project is under way to separate on and off-reserve statistics, so that in the future we will be able to report in this way. We know much less about non-status First Nations, Métis people, and Aboriginal people living in urban areas. Health authorities should consult with Aboriginal groups to determine how to record information about the Aboriginal population in health databases, so that information is complete, comparable, and useful for planning purposes. One approach would be to record Aboriginal identity or ancestry (similar to the Census questions) on all health records.

## Targets

What targets are achievable? The Provincial Health Officer proposes that we challenge ourselves to work on health inequities faster and more strategically than we are currently doing. Each health authority will need to set their own regional targets, depending on local needs and priorities. Some suggested provincial-level targets for improving Aboriginal health are as follows:

- Achieve and maintain infant mortality in the Status Indian population at a rate equal to the general population by 2005.
- Develop measures of success for early childhood growth and development by 2005.
- Increase immunization rates among two-year-old children to 85 per cent by 2005.

- Reduce Aboriginal smoking rates by one per cent per year in order to lower the current smoking rate of 45 per cent.
- Reduce Status Indian death rates due to HIV/AIDS to the 1991-2000 average rate of 1.2 per 10,000 by 2005, effectively halting the worsening trend (the 2000 rate was 1.4 per 10,000).
- Reduce the Status Indian injury death rate 50 per cent from the 1991-2000 baseline (17.7 per 10,000) by 2005.
- Improve Aboriginal women's Pap smear and screening mammography participation to a rate equal to other B.C. women (specific targets to be set once information systems are in place to allow improvements to be tracked).
- Decrease Status Indian preventable admissions to hospital 25 per cent from the 1987-2000 baseline (12.3 cases per 1,000) by 2005. (Preventable admissions include diabetes, asthma, hypertension, neurosis, depression, and abuse of alcohol or other drugs – conditions that can usually be managed in the community without the need for hospital admission).
- Improve continuity of care for mental health patients by 3 per cent per year (from the baseline of 60 per cent in 2000-01), as measured by the proportion of Status Indian population hospitalized for a mental health diagnosis who receive community follow-up within 30 days of discharge.

# 1. Introduction

## Purpose and Scope

British Columbia's health goals, adopted by the provincial government in 1997, include a specific commitment to "improved health for Aboriginal peoples" (goal 5). This report provides an update on progress toward that goal, as well as information to support development of specific objectives and targets for Aboriginal health. In addition, this report features examples of programs and strategies that are innovative and effective in improving the health of Aboriginal people, in British Columbia or elsewhere in the world.

**Health Goals for British Columbia**

1. **Positive and supportive living and working conditions**
2. **Opportunities for all to develop individual capabilities and skills and to make healthy choices**
3. **Diverse, sustainable, healthy, safe physical environment'**
4. **Effective and efficient health system**
5. **Improved health for Aboriginal peoples**
6. **Disease and injury prevention**

*Health Goals for British Columbia*
December 1997

The health of Aboriginal people is improving, based on commonly used measures of physical health. Yet, numerous reports and studies have documented the fact that the health status of Aboriginal people, as a group, remains below that of the general population. Although research and reports are plentiful, there is still a sense that many British Columbians know very little about the health issues and challenges that Aboriginal people face. The Provincial Health Officer has prepared this report in the hope that it will increase awareness of Aboriginal health and actions we can take, as individuals and as a society, to support continued improvements in the health and well-being of Aboriginal people in this province.

Why should non-Aboriginal people take an interest? First, because inequality is a moral issue. British Columbians believe that everyone has a right to a long and healthy life. Secondly, because it is a constitutional, legal issue. Thirdly, improved Aboriginal health makes good economic and social sense – fewer costs for society, healthier communities and regional economies, and a healthier population. When Aboriginal health improves, everybody benefits.

**Definition of Aboriginal People**

**Aboriginal people are the descendants of the original inhabitants of North America. There are different concepts of "Aboriginality" based on ancestry, identity with Aboriginal groups, and legal status. Many of the available statistics about Aboriginal people pertain to specific Aboriginal groups, such as Status (Registered) Indians. When referring to legislation or statistics, this report uses the terminology appropriate to each set of data, e.g., Status Indian, First Nations on reserve, Aboriginal, so the readers will know which population group is covered. The term "Aboriginal" is used when data are inclusive of First Nations, Inuit, and Métis people or when available data are used to make inferences about the Aboriginal peoples as a whole.**

## Development Process

Many individuals and groups assisted the Provincial Health Officer in the preparation of this report. The Provincial Aboriginal Health Services Strategy (PAHSS) Steering Committee provided advice on the report's content and overall approach. The PAHSS Committee, other Aboriginal groups and organizations, and other reviewers provided comments and suggestions on drafts at various stages. Other individuals and organizations provided data and technical support. The Provincial Health Officer, Dr. Perry Kendall, gratefully acknowledges all contributors for their support and assistance. (For a list of contributors, see Appendix A).

No "new" data were collected for this report. Rather, the statistics in this report have been drawn from a variety of published and unpublished sources. Sixty indicators are used to describe health status, community environments, healthy growth and development, the physical environment, health services, and disease and injury prevention. Appendix C provides definitions, data sources, and an explanation of each of the 60 indicators used in the report.

**Time Line**
**Provincial Health Officer's Report on Aboriginal Health and Well-being**

| | |
|---|---|
| Winter 2000 | • Brainstorming sessions and consultations |
| 2001-May 2002 | • Hunt and gather information<br>• Prepare first draft |
| Summer 2002 | • Draft reviewed by contributors and external reviewers<br>• Comments incorporated |
| Fall 2002 | • Present report to Minister of Health Planning<br>• Submit report to Legislative Assembly |

## Definition of Health and Healing

Many Aboriginal people view health differently than does the general population, although the change in the mainstream definition of health toward a more holistic understanding is bringing the perspectives together.

To Aboriginal people, health is not merely the absence of illness or disease, nor is it a set of statistics or measurements. Health is understood to be the physical, spiritual, mental, economic, emotional, environmental, social, and cultural wellness of the individual, family, and community. A healthy community is one with resources and opportunities, whose members are self-confident and participate in the political, economic, and cultural life and are part of its decision-making processes. A circle or wheel is sometimes used to represent the inseparability of the individual, family, community, and world. The circle embodies the notion of health as harmony or balance with the physical and social environments.

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Colonization completely disrupted Aboriginal people's "circle of life" (Smylie, 2001). Many Aboriginal people suffer from a "depression of spirit" resulting from hundreds of years of damage to their cultures, languages, identities, and self-esteem. The term "healing" is used to refer to Aboriginal peoples' recovery from the powerlessness experienced as a result of colonialism, racism, sexual abuse, and loss of cultural and political institutions. It implies revitalization of their confidence in themselves, their communities and cultures – confidence that must be grounded in their daily lives (Royal Commission on Aboriginal Peoples, 1996). Learning about and acknowledging the errors of the past, making restitution where possible, and correcting distortions of history are essential first steps in the process of healing between Aboriginal and non-Aboriginal people.

This report begins from the premise that the visions for social, political, and economic well-being are inter-related, and that the key to improved health status emerges from the strength of Aboriginal families, communities, culture, and spiritual beliefs. Self-determination is a key factor not only in improving health status, but also in ensuring reclamation of Aboriginal peoples' control over their own health and well-being. Both Aboriginal and non-Aboriginal people have a role to play in working toward this vision of health and healing.

## Formal Commitments to Aboriginal Health and Well-being

Aboriginal people are entitled to the same fundamental rights and freedoms as all other Canadian citizens, including those universally-available benefits such as the Child Tax Benefit, Old Age Security, and Unemployment Insurance. There are specific constitutional and legal rights unique to Aboriginal people in Canada, such as the right to hunt and fish for subsistence, although even these rights are subject to regulations, in this case for conservation.

There are also programs that fulfill the government of Canada's legal and constitutional obligations to Status Indians under the *Indian Act*. These programs aim to bring the standard of living for Status Indians up to the level enjoyed by other Canadians (Indian and Northern Affairs Canada, 1998). On June 14, 2002, the federal government introduced a new bill in the House of Commons to overhaul the 126-year old Indian Act.

The 1996 *Royal Commission on Aboriginal Peoples* has played a major role in providing an action plan that has helped to address the needs of Aboriginal people. The Royal Commission saw "whole health" and healing as fundamentally important. To restore health and well-being, the Commission recognized that Aboriginal people required greater control over their social and economic futures (Royal Commission on Aboriginal Peoples, 1996). Since the release of the Royal Commission's report, the federal government has stepped up its efforts to transfer control over health and social services to First Nations communities. The long-term goal for most programs is to withdraw completely from direct delivery of services to First Nations on reserve, and to have these services delivered by First Nations themselves.

In January 1998, the federal government announced *Gathering Strength – Canada's Aboriginal Action Plan*, which called for a renewed partnership with Aboriginal people to work on key priorities that would result in jobs, growth, stability, and an improved quality of life for Aboriginal people. The government offered a Statement of Reconciliation, which acknowledged its role in the development and administration of residential schools and an environment where sexual abuse occurred (Ministry of Indian Affairs and Northern Development, 1997).

In British Columbia, the *B.C. Royal Commission on Health Care and Costs* (1991) pointed out that, on average, Aboriginal people in B.C. live in "third world" conditions. The Commission made a number of recommendations for improving services and for addressing the living and working conditions that contribute to poor health in Aboriginal communities. The B.C. Royal Commission also recommended that government enunciate specific health goals for the province, along with a method to assess and report on progress. In July 1997, the provincial government approved *Health Goals for British Columbia*, which included a goal of "improved health for Aboriginal peoples." When the goals were being developed, it was recognized that more work and discussion would be needed before specific objectives and targets could be set (B.C. Ministry of Health, 1997).

In 2001, the *New Era* document, the present provincial government's election platform, contained a promise of "better services for children, families, and First Nations" (B.C. Liberals, 2001). In December 2001, Premier Gordon Campbell wrote to his ministers to underscore government's commitment to "improve the day-to-day lives of Aboriginal people" (Campbell, 2001). Government's *Strategic Plan*, released in February 2002, reiterates those commitments (Province of British Columbia, 2002).

Although a comprehensive set of Aboriginal health targets has not yet been developed in B.C., individual government ministries, Aboriginal organizations, and stakeholder groups have established targets and other commitments for many specific Aboriginal health topics and issues. Where possible, targets and formal commitments are identified throughout this report.

# 2. The Aboriginal Population in British Columbia

*Who are the Aboriginal people of British Columbia? This chapter describes the Aboriginal population, the sources of health statistics, and how the term "Aboriginal" is defined in major surveys and databases.*

## Highlights

- 139,655 people in British Columbia self-identified as "Aboriginal" in 1996, according to the Canada Census question on Aboriginal identity. This is about 3.6 per cent of the provincial population. A larger number – 184,445 – said their ancestral roots were Aboriginal.
- The Aboriginal population is growing, overall and as a share of the provincial population.
- Like the provincial population, the Aboriginal population is aging. However, the Aboriginal population remains much "younger" than the general B.C. population. Children and youth will continue to form a large segment of the Aboriginal population in the coming years.
- Statistics about Aboriginal people come from a variety of data sources, and many of these contain data only on specific Aboriginal groups, particularly Status (Registered) Indians. The current patchwork of information makes it difficult to provide a comprehensive picture of Aboriginal health and well-being.

## Terminology

A number of terms are used in referring to the indigenous population of Canada. It is important to understand the origin and definitions of these terms, because each group of Aboriginal people has a distinct history, culture, and legal entitlements. In addition, much of the current data about Aboriginal people refer only to specific Aboriginal groups.

Aboriginal people are the descendants of the original inhabitants of North America. The *Constitution Act* recognizes three groups of Aboriginal peoples: Indian, Inuit, and Métis people. First Nations has replaced the term Indian as the terminology preferred by many Indian people in Canada, although "Indian" is still used where referring to legislation or government statistics.

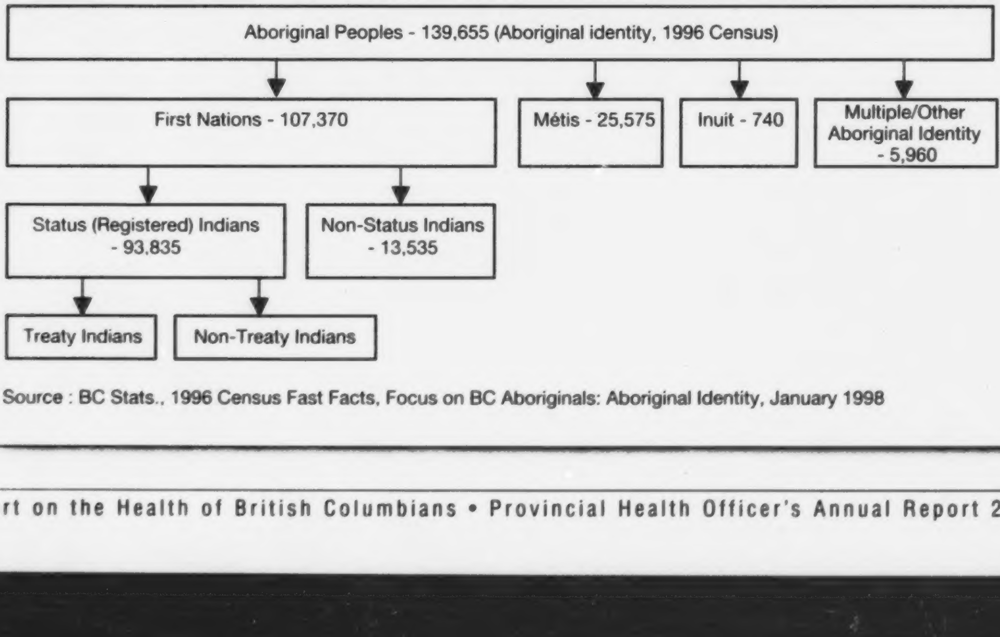
First Nations people are often considered members of a First Nation band or tribe. First Nations is not a legally defined term and refers to both Status Indians and Non-Status Indians. Status Indians (sometimes referred to as Registered Indians) are those who are entitled to receive the provisions of the *Indian Act*. Non-Status Indians are those who do not meet the criteria for registration or who have chosen not to be registered.

Status Indians can be either Treaty Indians or Non-Treaty Indians. Treaty Indians belong to a First Nation that has signed a treaty with the Canadian government. In British Columbia, most First Nations did not sign treaties, and this term refers only to First Nations included in Treaty 8 and the Douglas treaties, about 3,000 and 5,000 First Nations, respectively. A process is under way in which First Nations are currently negotiating modern-day treaties. The first modern treaty in British Columbia, the Nisga'a Final Agreement, came into effect on May 11, 2000. Unlike previous Canadian treaties, the Nisga'a Final Agreement involved both federal and provincial governments in negotiations with the First Nation. A significant difference from previous treaties is the provision for jurisdiction over, and resourcing to deliver, a range of community services including health and education. Approximately 5,400 First Nations people are covered by the Nisga'a Final Agreement.

The Inuit are a distinct population of Aboriginal people, most of whom live in northern Canada. The Inuit are registered under a revision to the *Indian Act* in 1924.

The Métis are people of mixed First Nation and European ancestry who identify themselves as Métis, as distinct from Indian people, Inuit, or non-Aboriginal people. Métis history dates back to the arrival of Europeans to the North American continent approximately 500 years ago. Most Métis people live in the three Prairie provinces. Unlike Status Indians and Inuit, the Métis are not entitled to the provisions of the *Indian Act*.

**Fig. 2.1** Terminology Used to Describe Aboriginal People in Canada and B.C. Population, 1996


Aboriginal Peoples - 139,655 (Aboriginal identity, 1996 Census)
First Nations - 107,370
Métis - 25,575
Inuit - 740
Multiple/Other Aboriginal Identity - 5,960
Status (Registered) Indians - 93,835
Non-Status Indians - 13,535
Treaty Indians
Non-Treaty Indians

Source : BC Stats., 1996 Census Fast Facts, Focus on BC Aboriginals: Aboriginal Identity, January 1998

## The Aboriginal Population

According to the 1996 Census, British Columbia is home to 139,655 people of Aboriginal "identity": 107,370 First Nations, 25,575 Métis, 740 Inuit people, and 5,960 Aboriginal people identifying with multiple or other groups (BC STATS, January 1998). A larger number – 184,445 – reported that their ethnic origin was Aboriginal (157,805 North American Indian, 29,610 Métis, 1,685 Inuit). These Census statistics may under-represent the actual numbers.

Before the time of first contact with Europeans, the indigenous population of B.C. is thought to have numbered between 80,000 and 125,000, although some experts now regard these figures as an under-estimate (Acheson, 1995; Boyd, 1994). During the first centuries of contact with Europeans, European newcomers introduced diseases such as smallpox, measles, tuberculosis, and influenza. These claimed thousands of lives, and by 1929, the Aboriginal population was reduced to 22,000. Toward the end of the 20th century, the Aboriginal population had regained its pre-contact level (Table 2.1).

Table 2.1 Aboriginal Population in B.C.

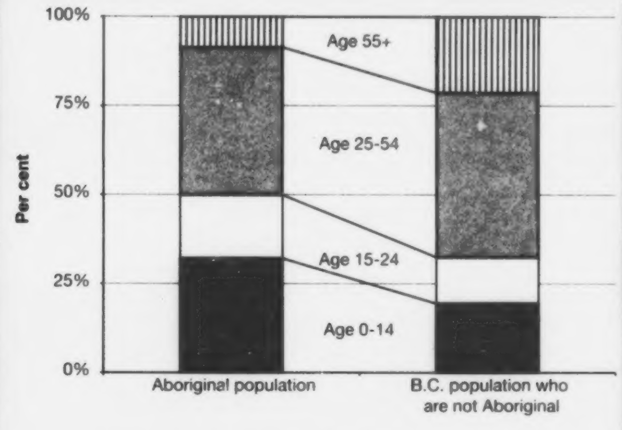
| **Year** | **Estimated population** |
|---|---|
| Pre-contact | 80,000 - 125,000 |
| 1929 | 22,000 |
| 1996 | 139,655 – 184,445 |

Sources: Pre-contact and 1929: Acheson, 1995. 1996: Statistics Canada, 1996 Census.

The Aboriginal population is much "younger" than the B.C. population as a whole. Half of the Aboriginal population is less than 25 years old, compared to one-third of the non-Aboriginal population (Figure 2.2).

Fig. 2.2

Age Distribution, Aboriginal and Non-Aboriginal Population in B.C. 1996

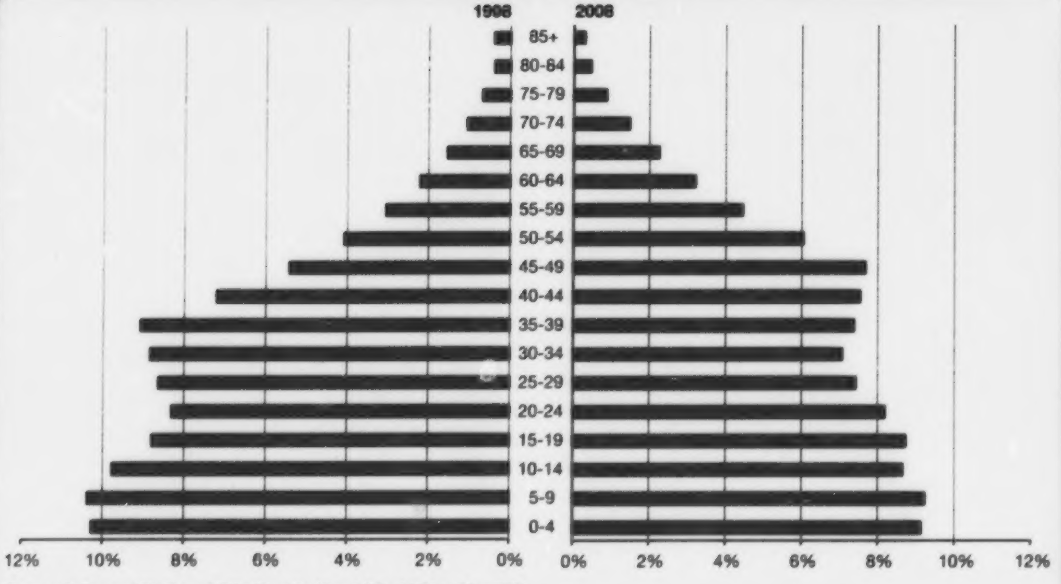


Source: Statistics Canada. 1996 Census. In 1996 Census Fast Facts. Issue 11. BC STATS, Feburary 1998.

The age distribution of the Aboriginal population is changing. In the 1960s, infant mortality declined rapidly, and birth rates remained high, so that more Aboriginal children were born and survived. This large generation of children is now moving into the middle years of life. By 2008, half of the population will be in their working years (age 25-64), based on projections for the Registered Indian population (Figure 2.3). Thus, like the provincial population, the Aboriginal population is aging, but it is aging into the labour force years, while the non-Aboriginal population is moving into the retirement years.

Fig. 23

Age Distribution, Registered Indian Population in B.C., 1998 and 2008 (Projected)



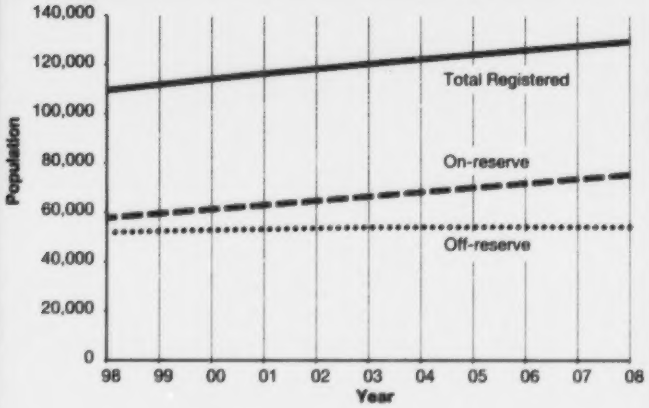
Source: Indian and Northern Affairs Canada. Unpublished tables, May 2001.

The Aboriginal population has been growing more rapidly than the B.C. population as a whole, mainly because of its younger population and higher birth rates. Population projections show that the Registered Indian population is expected to increase by almost 2 per cent per year, with the on-reserve population having an annual growth rate of 3 per cent (Figure 2.4) (Indian and Northern Affairs Canada, 2000). The annual growth rate for the province overall is projected to be 1.4 per cent per year.

What do these changes mean for Aboriginal families and communities? As the population grows and ages, there will be increasing pressures for employment, housing, and other services for people entering the labour force. Although the population is shifting toward older age groups, children and youth will continue to form a large proportion of the population. The needs of children, youth, young families, and adults in their working years will be an important focus for health and social services. Based on population numbers alone, services for older Aboriginal people would seem to be a less urgent issue than for the general population of British Columbia. However, given the lower average health status of the Aboriginal population, it may be that services for older Aboriginal people are needed at a younger age than in the overall population.

Fig. 2.4

Projected Registered Indian Population
B.C. 1998-2008



Source: Indian and Northern Affairs Canada. Unpublished tables, May 2001.
Note: Projections are based on the 1996 Indian Register (adjusted for late and under-reporting of births and deaths) and assumptions with respect to fertility, mortality, migration, reinstatement, and status inheritance.

## Sources of Data

Good information is essential in advancing the health status of Aboriginal people. Information helps us to describe health needs and to measure progress in reducing the gaps that exist between Aboriginal people and the rest of the population. Information includes statistics, as well as qualitative information about people's health experiences. The information presented in this report is not as complete and comprehensive as we would like. Nonetheless, the situation is improving, and this report is certainly more complete than it would have been a decade ago.

Even counting the Aboriginal population is not a simple task, because there are different concepts of "Aboriginality" based on ancestry, self-identity with Aboriginal groups, and legal Indian status. Table 2.2 shows three sources of information about the Aboriginal population: the Indian Register, the database maintained by B.C. Vital Statistics Agency, and the Canada Census. Each of these sources has strengths and limitations.

### Table 2.2 Examples of Data Sources — Aboriginal Population

| Characteristic | Data Source | | |
|---|---|---|---|
| | Indian Register | Vital Statistics database | Census |
| **Owner** | Indian and Northern Affairs Canada (INAC). | B.C. Vital Statistics Agency, Ministry of Health Planning. Analysis is undertaken in collaboration with First Nations and Inuit Health Branch, Health Canada. | Statistics Canada |
| **Terms used** | Registered Indians | Status Indians | Aboriginal self-identity and/or ethnic origin.<br>North American Indian (registered, not registered), Métis, Inuit. |
| **Who's included** | Individuals registered under the *Indian Act*, including those residing outside of Canada, those in institutions, and homeless individuals. | Individuals identified as Status Indians resident in B.C. in any of three sources: Health Canada's Status Indian Verification File, vital statistics (birth and death) registrations, and the Status Indian entitlement files from the B.C. Medical Services Plan (MSP) database. | Individuals who report that they are a Band member or a Registered Indian, have Aboriginal ancestry, or consider themselves to be Aboriginal, based on Census questions. |
| **Strengths** | • Authoritative source for historical and current data on all Registered Indians.<br>• Population projections are produced regularly. | • The most complete and up-to-date estimates for Status Indians in B.C., due to extensive computer matching process.<br>• Can be used to produce birth, death, and health services statistics. | • Inclusive definition of Aboriginal. Includes Aboriginal ancestry, self-reported identity, and legal status.<br>• Demographic and social characteristics can be compared to the general (non-Aboriginal) population. |
| **Limitations** | • Residency may be outdated.<br>• Does not provide information about Métis or non-Registered (non-status) First Nations. | • Data available from 1991 only (historical trends are not available using current methodology).<br>• Does not provide information about Métis or non-status First Nations. | • Incomplete enumeration and under-coverage, both off and on reserve.<br>• Census conducted only every 5 years.<br>• Survey definition changed in 1996; therefore, historical trends are not available |
| **Population estimate for B.C.** | 1998: 109,513 (adjusted for late and under-reporting of births and deaths) | 2000: 152,689 | 1996: 139,655 (Aboriginal self-identity)<br>184,445 (Aboriginal ethnic origin) |

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The Indian Register is a list of Registered Indians (as defined by the *Indian Act*) kept by Indian and Northern Affairs Canada. Information about the demographic characteristics of the Indian population is updated regularly by band officials and published for December 31 of each year.

The Census is the vehicle used to count the Canadian population. The 1996 Census asked two questions - one about Aboriginal identity, as well as one about ethnic origin or ancestry. In 1991 and earlier, the Census did not ask about Aboriginal identity. The Aboriginal identity question shifts the focus away from the background of one's ancestors to the individual's own perception of their Aboriginal identity.

Most of the 1996 Census data in this report are based on Aboriginal self-identity questions, so figures include those who reported themselves as identifying with at least one Aboriginal group and/or who reported being a Registered Indian, and/or as being members of an Indian Band or First Nation. The 1996 data cannot be directly compared with ancestry-based data from previous censuses. Thus, we are not able to show time trends on demographic patterns.

There is always some under-coverage with a Census, but it is higher among Aboriginal people than among other segments of the population. Under-representation happens because some reserves are excluded from enumeration, exclusion of people who are homeless or living in rooming houses, and the decision of some Aboriginal persons not to identify themselves as Aboriginal or to complete the Census form. After years of being studied, many Aboriginal people are reluctant to participate in surveys in which they have no control over the information gathered or how it is used.

Following the 1991 Census, the first Aboriginal Peoples Survey was conducted, and this is the most recent full survey of the Aboriginal population. It collected data on peoples who identified as Aboriginal, with survey results available for Indian, Métis, and Inuit peoples. The Royal Commission on Aboriginal Peoples used the Aboriginal Peoples Survey as its main source of demographic and socio-economic data for its research studies and final report. The Royal Commission recommended a regular survey to monitor trends.

A second Aboriginal Peoples Survey is being held following the 2001 Census, with data collection to be completed in June 2002. Statistics Canada has made a special effort to talk with Aboriginal groups to ensure that the survey meets the needs of Aboriginal organizations and other stakeholders and to build participation in the survey. Results will provide a more complete and accurate picture of the lives of Aboriginal people and their communities.

### The 2001 Aboriginal Peoples Survey

Aboriginal organizations and government need information about the social and economic conditions of the Aboriginal population in order to determine what kind of programs and services people need. To work toward this aim, Statistics Canada, with support from national Aboriginal organizations, conducted its second Canada-wide Aboriginal Peoples Survey from September 2001 to June 2002.

The first Aboriginal Peoples Survey was conducted in 1991. As the 1991 survey was a new survey, and it incorporated limited input from Aboriginal people, many Aboriginal communities were reluctant to participate. In contrast, the 2001 survey was developed after two years of consultation with national Aboriginal organizations. Questions were added to ensure the usefulness and relevance of the information being gathered for Aboriginal communities. There was also an effort to hire Aboriginal interviewers – recognizing that people within the community know the best approach.

Because of the improvements to methodology, Statistics Canada noticed a marked increase in Aboriginal participation during phase one of the 2001 survey, which took place from October to December 2001. The final sample will include more than 100,000 Aboriginal peoples' responses – 50 per cent of the population, and 20 percent of the communities Canada-wide – and Statistics Canada believes the data gathered will be of a very high quality.

The 2001 Aboriginal Peoples Survey asked questions about work, health, housing, education, technology, and other lifestyle issues. The survey was conducted both on and off-reserve, and all groups of Aboriginal people were represented. Métis and Inuit respondents were asked additional questions, providing comprehensive results from these communities for the first time.

The data collected from the Aboriginal Peoples Survey is scheduled to be released in spring of 2003. For additional information about the Aboriginal Peoples Survey, contact Statistics Canada by telephone at 1-800-263-1136, or visit their website at http://www.apsurvey.ca/debwetp.html

## Other Surveys

Other sources drawn on for this report are the *First Nations and Inuit Regional Health Survey* and British Columbia's *Adolescent Health Survey*. The First Nations and Inuit Regional Health Survey is a broad-based survey of children, youth, and adults living on reserve. The survey was designed, implemented, and analyzed by First Nations and Inuit people. In British Columbia, the First Nations Chiefs' Health Committee coordinated the survey, and a focus group study was added to permit communities to include their own local questions. Provincial and national reports of survey results have been published (B.C. Regional Health Survey Steering Committee, 2000; First Nations and Inuit Regional Health Survey National Steering Committee, 1999).

**British Columbia First Nations Regional Health Survey**

The 1997 BC First Nations Regional Health Survey was an opportunity for the First Nations of B.C. to partner with the National First Nations and Inuit Regional Health Survey to develop a survey that included both a national and B.C. focus.

B.C. First Nations people participated at every step of the survey's development, pre-testing, and implementation. Higher levels of involvement by First Nation's communities translated into higher levels of confidence in the process and in the data. The survey, carried out in 1997, had a very high response rate – 81%. For the 16 communities in B.C. that participated, the information is being used to determine community health needs and to develop community health plans.

The next survey is scheduled to be launched in the summer of 2002. This survey will combine questions developed at the national level – pertinent to cross-Canada analysis – as well as regional questions developed specifically by B.C. First Nations. There are three survey instruments, one each for adults, youth between 12 and 17 years old, and children from newborn to 11 years of age. More than 200 questions on personal information, residency, children's health, health services, tobacco use, medical conditions, community health, disability, residential schools and wellness were asked. The survey is longitudinal, which means that it will measure trends and changes in health status over time.

Information about the British Columbia First Nations Regional Health Survey and its results are available from the First Nations Chiefs' Health Committee website at: http://www.fnchc.ca/publications.html

The *Adolescent Health Survey* is the largest study ever conducted of the physical and emotional health of B.C. youth in Grades 7-12. Although the survey was not designed specifically for Aboriginal students, 1,707 students identified themselves as Aboriginal in the 1998 survey, and a profile of Aboriginal youth health in B.C. was published (The McCreary Centre Society, 2000). The McCreary Centre Society has also conducted studies of street youth and of youth in custody centres, and these studies provide information about Aboriginal and other youth who did not participate in the school-based *Adolescent Health Survey* (The McCreary Centre Society, 2001).

The sampling design of surveys such as the National Population Health Survey excludes First Nations people living on-reserve (as well as people living on Canadian Forces bases and some remote areas). Aboriginal people living off-reserve may be selected randomly in these national surveys, but usually the sample size is too small to produce reliable information about the Aboriginal population in British Columbia.

No data collection is perfect. All sources have some limitations. We know the most about the Status (Registered) Indian population, while much less is known about non-Registered First Nations, the Métis, and urban Aboriginal populations. While numbers do not tell the whole story of people's lives, statistics are an important part of understanding the make-up of the population and planning for current and future services. Community-level data and stories are perhaps the most meaningful and useful. However, such data are difficult to collect and report on an ongoing basis. In the future, British Columbia should look for innovative ways of sharing the knowledge that communities have about their health, so that communities can learn from each other.

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### The Métis Population

The Métis people are one of the three Aboriginal peoples in British Columbia. Government does not keep or collect Métis specific information. In 1981, the term Métis was first used in the Canada Census, at which time about 16,470 persons living in B.C. gave their origin as Métis (single plus multiple responses). In 1996, 29,610 people gave their origin as Métis. The ethnic origin question has been asked in a different manner in the censuses. Thus, the number of responses is not comparable. B.C. health statistics on Métis people do not exist, but information at the national level indicates that the health status and concerns of this population are similar to other Aboriginal groups. More information about the Métis people can be found in *A Profile of the Métis*, Statistics Canada, 1991 and the *Royal Commission on Aboriginal Peoples*, 1996.

## What Actions Can We Take?

Individuals can:

- Count yourself in! Participate in the Canada Census and other surveys that are used for planning water and sewer services, housing, education and school facilities, and health and social services.

Aboriginal groups can:

- Work to improve the information that is collected about the Aboriginal population.
- Find ways to share health status information and success stories between communities.

Government can:

- Consult with Aboriginal groups to determine how to record information about the Aboriginal population in government databases, so that information is complete, comparable, and useful for planning purposes. One approach would be to record Aboriginal identity or ancestry (similar to the Census questions) on all health records.

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# 3. Health Status

*How healthy are Aboriginal people in British Columbia? What are the trends and patterns, and what has to happen for health status gaps to be improved? This chapter provides an overview of health status, based on summary measures of population health and well-being.*

Numerous studies and reports have documented the fact that the health status of Aboriginal people falls below that of the general population. While health status remains unacceptably low relative to the general population, there are encouraging signs. A number of traditional health status indicators are showing major gains.

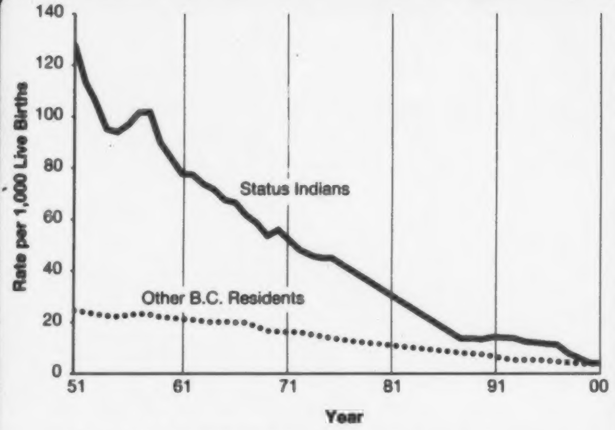
## Highlights

- The health status of Aboriginal people is improving, based on traditional health status measures.
- For infant and all-age mortality rates, the gap is narrowing between Status Indians and other British Columbians. If these trends continue, Status Indians could achieve rates comparable to other British Columbians some time during this decade.
- Aboriginal people have a level of health that is below that of the general population. Status Indians in B.C. can expect to live 7.5 years less than other British Columbians. For almost every cause of death, Status Indians die at higher rates and younger ages. HIV/AIDS and alcohol-related deaths show a worsening trend.
- Status Indians living in the North West, Peace Liard, Okanagan Similkameen, and Thompson regions have the highest levels of health, based on life expectancy, overall mortality, and premature deaths. Status Indians in the Vancouver and Simon Fraser regions have the poorest results on these particular measures. This differs from the north-south pattern among other B.C. residents, which show higher levels of health in the southern part of the province.

- National surveys have found that chronic conditions such as heart disease, diabetes, and arthritis are more common among Aboriginal people. The number of people experiencing these chronic conditions will increase in the coming years, because of population growth and because health and illness patterns are shifting from infectious to chronic diseases.
- Most of the available health statistics on Aboriginal people relate to those who are registered with Indian and Northern Affairs Canada or who live on reserve. There is a critical need for accurate, region-specific data about the health problems that Aboriginal people experience, including non-status First Nations, Métis, and Aboriginal people living in urban areas.

Fig. 3.1

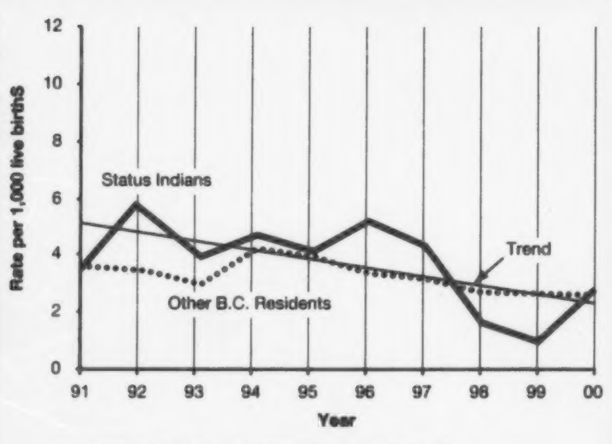
Infant Mortality Rate, Status Indians and Other B.C. Residents, 1951 - 2000



Source: B.C. Vital Statistics Agency. Rates plotted as a moving average.

Fig. 3.2

Neonatal Mortality, Status Indians and Other B.C. Residents, 1991 - 2000



Neonatal death: death of a child under 28 days of age.
Source: B.C. Vital Statistics Agency. Unpublished tables, June 2002.

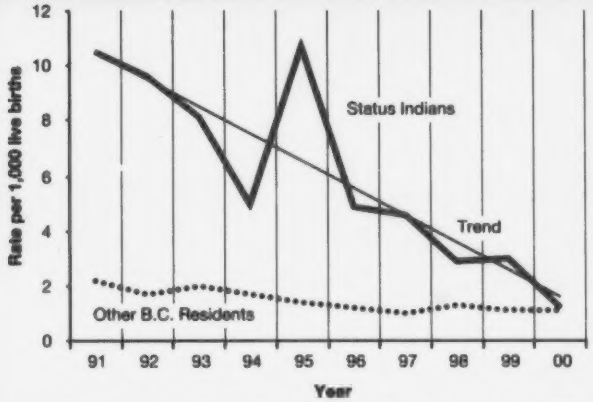
## Trends

Status Indian infant mortality has dropped dramatically, and this represents a major achievement. In the 1950s, one in every ten Status Indian babies died during the first year of life – a rate that was five times the provincial average. In 2000, the rate was 4.0 per 1,000 live births, approaching the general population rate of 3.7 (Figure 3.1). In addition, both neonatal and post neonatal mortality rates have also dropped. Figures 3.2 and 3.3 illustrate that Status Indians have reached similar levels in neonatal and post neonatal mortality rates as other B.C. residents.

Overall mortality (death) rates are also improving, and the gap is narrowing between Status Indians and the rest of the population. In 1991, the Status Indian mortality rate was twice the provincial average. By the year 2000, the rate was less than 1.5 times that of the general population. If this trend continues, Status Indians could achieve a death rate comparable to other British Columbians some time within the next ten years (Figure 3.4).

**Fig. 3.3**

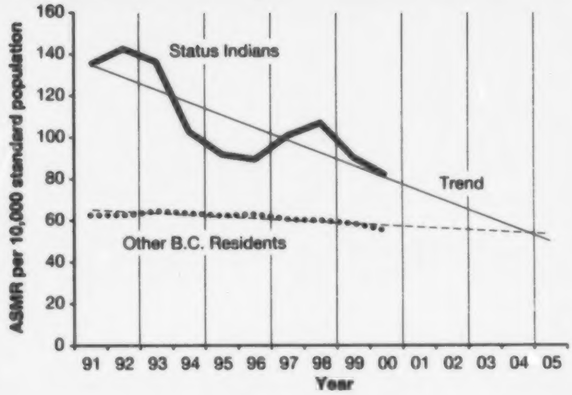
**Post Neonatal Mortality, Status Indians and Other B.C. Residents, 1991 – 2000**



Number of deaths between 28 and 364 days after birth, as a rate per 1,000 live births.
Source: B.C. Vital Statistics Agency. Unpublished tables, June 2002.

**Fig. 3.4**

**Mortality Rates for All Causes of Death, Status Indians and Other B.C. Residents, 1991 – 2005 (projected)**



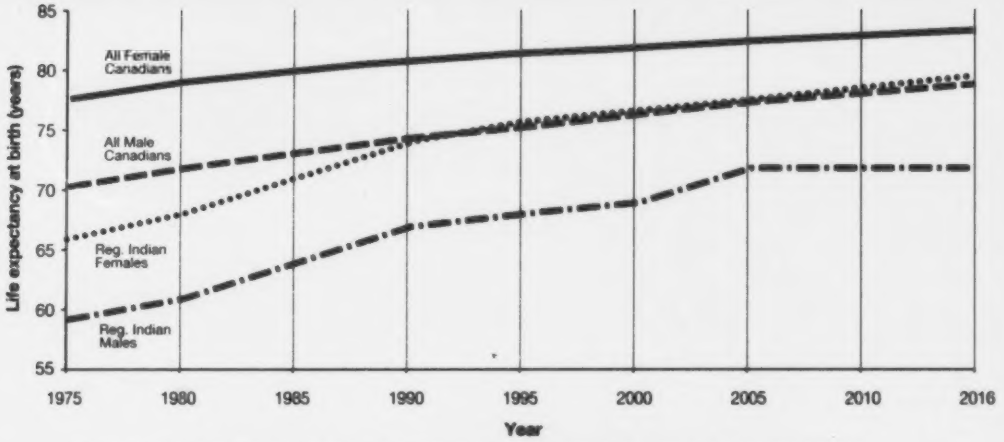
Age standardized mortality rate per 10,000 standard population (Canada 1991 Census).
Source: B.C. Vital Statistics Agency. Unpublished tables, June 2002.

Life expectancy for Registered Indians in Canada continues to improve. By 2016, the gap between Registered Indians and the general Canadian population is expected to narrow to seven years for men and 3.8 years for women (Figure 3.5). Comparable projections for British Columbia are not available at this time.

For Status Indians in British Columbia, most causes of death showed an improving trend in the 1990s. A few causes – diabetes, lung cancer, and accidental falls – have not shown much improvement. HIV/AIDS and alcohol-related deaths are apparently worsening, although trends for HIV/AIDS and alcohol-related deaths were not "statistically significant" over the time period studied (Table 3.1). In part, the increase in alcohol-related deaths is due to a change in reporting. In 1993, the Medical Certification of Death form was revised to include a space to note lifestyle factors that contributed to the death. More information on alcohol-related mortality rates can be found in the section on Health Behaviours (Chapter 5, page 64).

Fig. 3.5

Projected Life Expectancy for Registered Indian Population and Canadian Population, Canada, 1975–2016



Source: Indian and Northern Affairs Canada, March 2002. Basic Departmental Data 2001. Cat. No. R12-7/2001E. http://www.ainc-inac.gc.ca/pr/sts/bdd01/bdd01_e.html

**B.C. Vital Statistics Agency**

The B.C. Vital Statistics Agency produces comprehensive birth and death-related statistics on the Staus Indian population in British Columbia. This ongoing work is a collaborative project funded by the First Nations and Inuit Health Branch, Health Canada.

## Table 3.1 Trends in Status Indian Mortality, B.C., 1991 - 2000

| Cause of Death | Trend in Age Standardized Mortality Rate | | | |
|---|---|---|---|---|
| | Worsening | Not Much Change | Improving | Per cent of deaths |
| **Infectious diseases** | | | | 3.7% |
| HIV/AIDS | | | | 2.0% |
| Tuberculosis | | | | 0.2% |
| **Cancer** | | | * | 15.2% |
| Lung | | | | 3.3% |
| Female breast | | | | 1.1% |
| Colorectal | | | | 1.5% |
| Cervical | | | | 0.3% |
| Prostate | | | | 0.9% |
| **Endocrine diseases** | | | | 2.7% |
| Diabetes | | | | 1.9% |
| **Circulatory system diseases** | | | * | 23.6% |
| Ischemic heart disease | | | * | 10.5% |
| Cerebrovascular/stroke | | | * | 5.3% |
| **Respiratory system** | | | * | 7.6% |
| Pneumonia and influenza | | | | 4.0% |
| Chronic pulmonary disease | | | | 1.8% |
| Asthma | | | | 0.2% |
| **Digestive system diseases** | | | | 6.8% |
| Chronic liver disease/cirrhosis | | | | 3.4% |
| **External causes** | | | * | 27.2% |
| Motor vehicle accidents | | | * | 6.6% |
| Accidental poisoning | | | | 6.1% |
| Accidental falls | | | | 1.9% |
| Fire and Flames | | | | 0.1% |
| Suicide | | | * | 5.5% |
| Homicide | | | * | 1.9% |
| **All causes of death – Total** | | | * | 100.0% |
| Alcohol-related deaths | | | | 23.5% |
| Medically treatable diseases | | | | 1.8% |
| Drug-induced deaths | | | | 6.2% |
| Smoking-attributable mortality | | | | 12.2% |

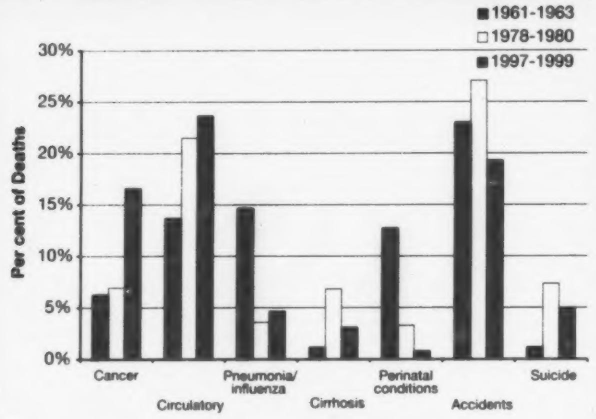
* Trends in age-standardized mortality rates are "statistically significant" at the 5 per cent level. This means that changes in the rates are probably not the result of chance or measurement error.

Source: B.C. Vital Statistics Agency. Unpublished tables, June 2002. ICD-9 converted to ICD-10. For disease code definitions, see the Vital Statistics Annual Report 2000.

Longer-term trends show that mortality patterns have been shifting. Forty years ago, pneumonia and perinatal conditions (that occur before or around the time of birth) each caused as many deaths as heart disease (Figure 3.6). Fifteen to twenty years later, pneumonia and perinatal deaths had declined, while suicide and cirrhosis of the liver emerged as major killers, reflecting the social and cultural upheaval the Aboriginal communities were experiencing (Foster, Macdonald, Tuk, Uh, & Talbot, 1995). Today, accidents remain a major cause of death, but circulatory diseases and cancer combined account for 40 per cent of deaths.

**Fig. 3.6**

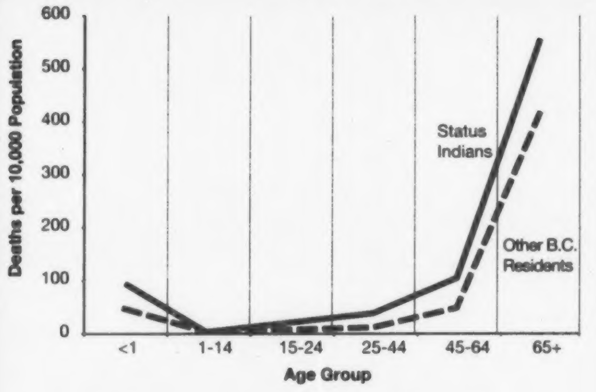
Changes in Causes of Death Since the 1960s, Status Indians in B.C.



Source: B.C. Vital Statistics Agency. Annual Reports 1961-1963, 1978-1980, and unpublished tables, January 2002.

**Fig. 3.7**

Mortality Rates by Age Group, Status Indians and Other B.C. Residents, 1991–2000



Deaths (all causes) per 10,000 population in each age group.
Source: B.C. Vital Statistics Agency. Unpublished tables, June 2002.

These stages of health and illness are found among all peoples of the world who undergo colonization. Following conquest, indigenous people experience high rates of infectious disease and high death rates, especially among infants and children. During the second stage, infectious diseases decline, and in the third stage, chronic diseases become the major cause of death. Canadian Aboriginal people are between the second and third stages (Locust, 1999).

## Age, Gender, and Regional Differences

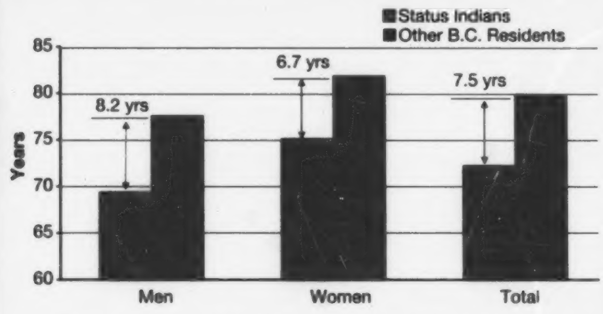
Children are most vulnerable to illness or death in the first year of life. After age one, the risk of dying declines and does not reach this high rate again until middle age. Compared to the B.C. population overall, Status Indians die at higher rates across all age groups (Figure 3.7).

As a result of these higher death rates, Status Indians in British Columbia can expect to live 7.5 years less than other B.C. residents. The gap between Status Indians and the general population is greater for men (8.2 years) than for women (6.7 years) (Figure 3.8).

Communities are not identical in their health status. Across the province, there are large regional differences in health, and regional variations are found among the Aboriginal population too (Figure 3.9). Status Indians living in the North West, Peace Liard, and

Fig. 3.8

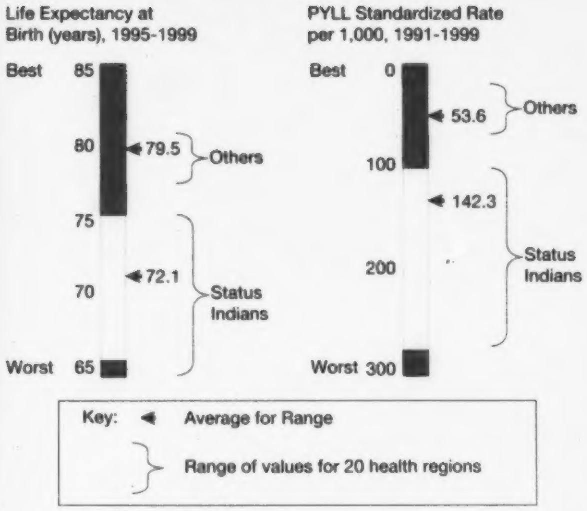
Life Expectancy at Birth: Status Indians and Other B.C. Residents, 1996–2000



Source: B.C. Vital Statistics Agency. Unpublished tables, June 2002.

Fig. 3.9

Regional Variation in Health Status Indicators, B.C.



PYLL - Potential Years of Life Lost
Source: Regional Analysis of Health Statistics for Status Indians in British Columbia 1991-1999. B.C. Vital Statistics Agency, July 2001.

Thompson regions have the highest level of health – approaching that of others within their region – based on life expectancy, overall mortality, and premature deaths. Status Indians in the Vancouver and Simon Fraser regions have the poorest results on these particular measures (for regional data, see Appendix E). Status Indian infant mortality is lowest (best) in the Thompson region and highest in Upper Island and Central Vancouver Island, based on the nine-year period 1991 to 1999. However, all areas have shown an improving trend in infant mortality over the last few years.

Regional rankings for the Status Indian population are quite different from those of other B.C. residents. For Status Indians, several northern and interior regions (North West, Peace Liard, Okanagan Similkameen, Thompson) show the highest levels of health, based on the indicators presented in this chapter. For other B.C. residents, higher levels of health are found in the southern part of the province, with North Shore, Richmond, and Capital being the best-ranked regions (Table 3.2). A recent Manitoba study found a similar result: northern Tribal Council areas have better health status than those in the south – the opposite trend from other Manitobans (Martens et al., 2002).

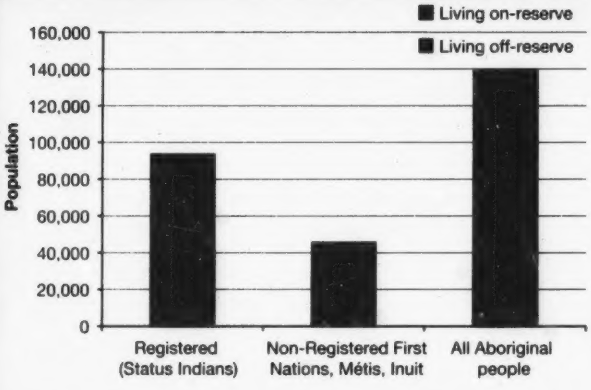
## Table 3.2 — Regional Ranking on Health Status Measures

| Region | Rank (1 = "best") | |
|---|---|---|
| | Status Indians | Other residents |
| **North West** | 1 | 16 |
| Peace Liard | 2 | 10 |
| **Okanagan Similkameen** | 3 | 5 |
| Thompson | 4 | 18 |
| **Burnaby** | 5 | 4 |
| Coast Garibaldi | 6 | 7 |
| **North Okanagan** | 7 | 11 |
| North Shore | 8 | 1 |
| **Northern Interior** | 9 | 19 |
| Fraser Valley | 10 | 13 |
| **Cariboo** | 11 | 17 |
| Central Vancouver Island | 12 | 8 |
| **Upper Island/Central Coast** | 13 | 14 |
| South Fraser Valley | 14 | 6 |
| **Capital** | 15 | 3 |
| East/West Kootenay | 16 | 12 |
| **Richmond** | 17 | 2 |
| Simon Fraser | 18 | 9 |
| **Vancouver** | 19 | 15 |

Overall rank on 5 health status measures: infant mortality, life expectancy of men and women, and potential years of life lost rate (natural causes, external causes, all causes). Rankings are based on data in Regional Analysis of Health Statistics for Status Indians in British Columbia 1991 - 1999. B.C. Vital Statistics Agency, July 2001. Scores were calculated based on a formula that considers how much each region differs from the median value.

Fig. 3.10

Aboriginal Population in B.C., 1996



139,655 persons of "Aboriginal identity" lived in B.C. in 1996. About two-thirds were Registered (Status) Indians.
Source: BC STATS, 1996 Census Fast Facts, Issue 13, March 1998.

**A Note about Health Statistics**

**Data about births, deaths, and the use of health services are available for Status Indians only. Status Indians are assigned a special designation on their Care Cards, because they have registered to get their Medical Services Plan premiums paid by Health Canada on the grounds that they have Indian status. The Status Indian identifier is used by various ministry of health databases to retrieve Status Indian specific data. Aboriginal people who are not Status Indians are not eligible for this registration. Thus, B.C. health statistics do not include non-status First Nations, Métis, or Inuit – about one-third of the Aboriginal population (Figure 3.10).**

## International Comparisons

The lower health status of Aboriginal people is not unique to British Columbia. This pattern is found across Canada and in Australia, New Zealand and the United States, which also have indigenous peoples. In each of these countries, Aboriginal people experience lower life expectancies, higher infant mortality, and much higher rates of unintentional injuries and suicide than the rest of the population. Based on 1986 data, the smallest differences occur in New Zealand, which has only one indigenous language and culture, no reserves, and greater political representation and influence at the national level (Elliott & Foster, 1995). New Zealand changed its ethnicity classification in 1995, and data since that time show an 8 year gap in life expectancy between Maori and non-Maori (New Zealand Ministry of Social Policy, 2001). This is slightly worse than the 7.4 year gap between Status Indians and other British Columbians for the period 1995-1999.

Canada, New Zealand and the United States have all shown marked improvements in indigenous health over the past two to three decades. This progress has been characterized by an initial rapid drop in death rates, followed by a more gradual decline as levels of the non-indigenous population are approached (Ring & Firman, 1998).

### Measuring Maori Health

**Like British Columbia, New Zealand has found that there are large gaps in information about their indigenous people. Differences in the way that ethnicity has been defined and measured have made it difficult to form an accurate and coherent picture of inequalities between Maori (the indigenous people of New Zealand) and non-Maori. New Zealand has taken steps to improve the measurement of health inequalities and to use the best available information to priorize Maori health issues, so that health gains can be maximized with the resources available.**

**After considering areas where there was significant potential to reduce Maori and non-Maori health disparities, New Zealand established eight "Maori health gain priority areas": immunization, hearing, smoking cessation, diabetes, asthma, oral health, mental health, and injury prevention (New Zealand Ministry of Health, April 2001). Through annual funding agreements, the Ministry of Health and District Health Boards will be held accountable for improvements in these and other priority areas outlined in the New Zealand Health Strategy. The first progress report found that there has been progress in all eight Maori health gain priority areas (New Zealand Ministry of Health, December 2001).**

**The New Zealand Ministry of Health has developed a toolkit for agencies involved in measuring and monitoring whether health disparities are improving or worsening. *Indicators of Inequality* contains a classification of disparity indicators and a menu of potential indicators, of which approximately 25 are proposed as a minimum set (New Zealand Ministry of Health, June 2001a). A companion report, *Monitoring Ethnic Inequalities in Health*, summarizes the state of ethnic health statistics in New Zealand and ways for improving these statistics in the future (New Zealand Ministry of Health, June 2001b).**

**New Zealand also expanded its Burden of Disease Study to help rank health issues among Maori peoples. Using disability adjusted life years (DALYs), 85 diseases and 8 risk factors were ranked according to their health impact, their contribution to relative inequality with the non-Maori population, and their potential to be modified. Heart disease made the largest contribution to Maori health loss, and smoking was the leading risk factor (New Zealand Ministry of Health, May 2001).**

**More information about Maori health is available from http://www.maorihealth.gov.nz.**

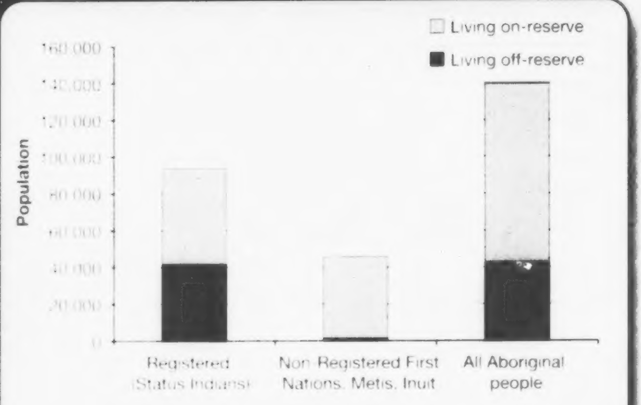
## Table 3.2 — Regional Ranking on Health Status Measures

| Region | Rank (1 = "best") | |
|---|---|---|
| | Status Indians | Other residents |
| North West | 1 | 16 |
| Peace Liard | 2 | 10 |
| Okanagan Similkameen | 3 | 5 |
| Thompson | 4 | 18 |
| Burnaby | 5 | 4 |
| Coast Garibaldi | 6 | 7 |
| North Okanagan | 7 | 11 |
| North Shore | 8 | 1 |
| Northern Interior | 9 | 19 |
| Fraser Valley | 10 | 13 |
| Cariboo | 11 | 17 |
| Central Vancouver Island | 12 | 8 |
| Upper Island/Central Coast | 13 | 14 |
| South Fraser Valley | 14 | 6 |
| Capital | 15 | 3 |
| East West Kootenay | 16 | 12 |
| Richmond | 17 | 2 |
| Simon Fraser | 18 | 9 |
| Vancouver | 19 | 15 |

Overall rank on 5 health status measures: infant mortality, life expectancy of men and women, and potential years of life lost rate (natural causes, external causes, all causes). Rankings are based on data in Regional Analysis of Health Statistics for Status Indians in British Columbia 1991 - 1999, B.C. Vital Statistics Agency, July 2001. Scores were calculated based on a formula that considers how much each region differs from the median value.

Fig. 3.10

Aboriginal Population in B.C. 1996



[illegible] persons of Aboriginal identity lived in B.C. in 1996. About two-thirds were Registered (Status Indians).
Source: BC STATS, 1996 Census Fast Facts, Issue 13, March 1998

### A Note about Health Statistics

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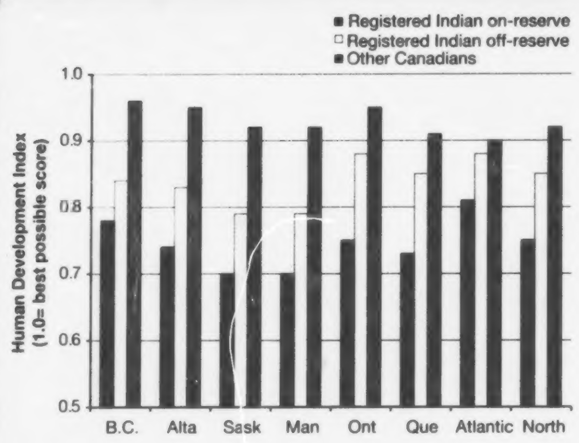
**Fig. 3.11**

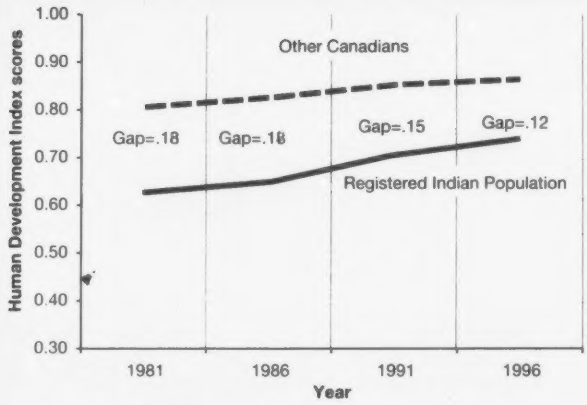
Human Development Index for Canadian Regions, 1996



Source: D. Beavon & M. Cooke, in press. Measuring the Well Being of Canada's Aboriginal Peoples. Report Number 1: Registered Indians in Canada, 1996. In J. White, P. Maxim, & D. Beavon (Eds.). Aboriginal Conditions: Research Foundations for Public Policy.
Note: "Other Canadians" includes non-registered Aboriginal people and non-Aboriginal people.

**Fig. 3.12**

Human Development Trend in Canada, Registered Indians and Other Canadians, 1981 - 1996



Source: D. Beavon & M. Cooke. Measuring the Well Being of Canada's Aboriginal Peoples. Report Number 2: Registered Indians 1981-1996. Draft 10/04/01.
Note: "Other Canadians" includes non-registered Aboriginal people and non-Aboriginal people.

Internationally, the United Nations Development Programme calculates an annual measure called the Human Development Index (HDI). The HDI measures a country's achievement in three areas: whether people lead a long life (life expectancy), whether people acquire formal knowledge (educational attainment), and whether people have a decent standard of living (income). For seven consecutive years (1994 to 2000), Canada was ranked as the best country in the world. (Our rank slipped to number three in 2001) (United Nations Development Programme, 2001).

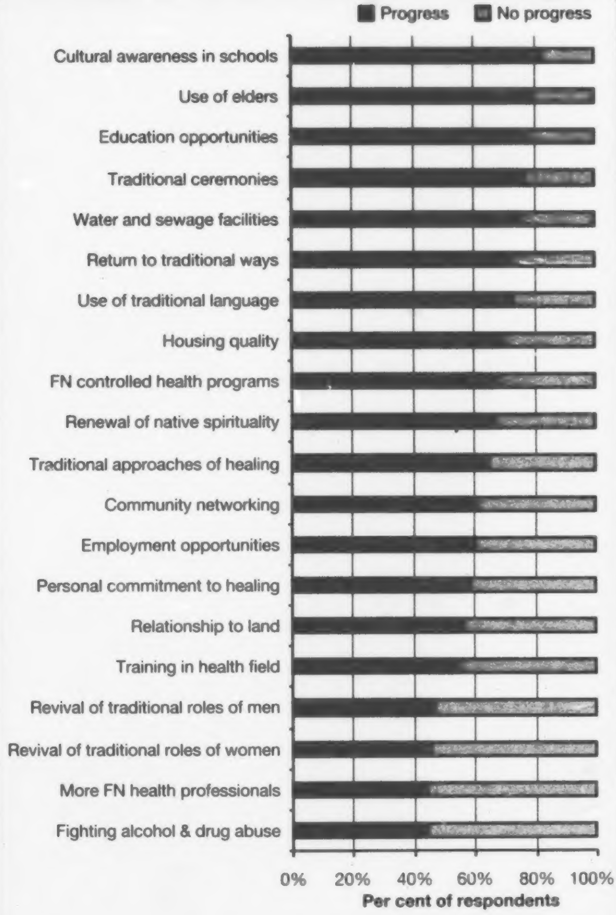
Although the United Nations ranks Canada highly, the fact remains that many First Nations people in Canada still live in conditions that fall far short of the average. Using the HDI methodology, an Indian and Northern Affairs study compared Registered Indians to the rest of the Canadian population. The Human Development Index was lower for Registered Indians, particularly those living on reserve, in all regions of Canada (Figure 3.11). The good news is that the gap between Registered Indians and others narrowed substantially between 1981 and 1996 (Figure 3.12), as a result of gains in life expectancy and educational attainment for Registered Indians. The gap in average annual income between Registered Indians and other Canadians actually increased during this time period (Beavon & Cook, 2001).

## What do Aboriginal People Say?

In a focus group study of B.C. First Nations on reserve, there was consensus that the health status of First Nations is "poor." Individual ratings in the survey were more positive, with 14 per cent saying their health was "excellent," and only 5.5 per cent saying it was "poor." In the same survey, more than two-thirds of respondents said there had been progress in areas such as health programming, housing quality, water and sewage facility development, and educational opportunities. Alcohol and drug problems were felt to be the most persistent, with the majority saying there has been "no progress" in this area (Figure 3.13). Substance abuse, dietary issues, access to health services, chronic diseases, and sexually transmitted diseases were ranked as the leading health problems (B.C. Regional Health Subcommittee, 2000).

Fig. 3.13

Progress in Community Wellness
B.C. First Nations, 1997



Progress: Factors showing "good progress" or "some progress" in the last two years.
Source: B.C. First Nations Regional Health Survey, 1997. Unpublished tables, prepared by R.A. Lockhart for the First Nations Chiefs' Health Committee, 1999.
For a copy of the survey questionnaire, see Appendix 1 in First Nations and Inuit Regional Health Survey. National Report 1999.
http://www.afn.ca/Programs/Health%20Secretariat/PDF's/title.pdf

Like most young people, the majority of Aboriginal youth in school (84 per cent) report good or excellent health. Only a small number – 2 per cent of boys and 3 per cent of girls – say their health is poor. Despite generally good health, 44 per cent of Aboriginal students report experiencing one or more physical health troubles, including headaches, stomach aches or back aches, more than once a week. Seventeen per cent report a health condition or disability that limits their activities (physical disability, long-term illness, mental or emotion condition, or being overweight or underweight) (The McCreary Centre Society, 2000).

National surveys have found that chronic conditions such as arthritis, heart disease, diabetes, and high blood pressure are more common among Aboriginal people (Table 3.3). Other immediate threats to health include smoking, teen suicide, teen pregnancy, mental health problems, HIV/AIDS, Fetal Alcohol Syndrome, and Sudden Infant Death Syndrome (SIDS) (Aboriginal Health Association of B.C., 1999; Health Canada, November 1999; B.C. Regional Health Subcommittee, 2000).

**Table 3.3 — Chronic Conditions**

| Condition | First Nations | General B.C. Population |
|---|---|---|
| Arthritis | 17% | 5% |
| High blood pressure | 17% | 7% |
| Breathing problems | 11% | 2% |
| Heart disease | 9% | 1% |
| Diabetes* | 4% | 3% |
| Cancer | 2% | 1% |

* Surveys have found varying rates of diabetes. Diabetes is discussed in Chapter 8.
Proportion of the population who say they have been diagnosed by a health professional as having a given condition.
Source: 1997 BC First Nations Regional Health Survey and National Population Health Survey 1996-97. In D. Martin & A. Jin, (2002). Selected Findings from A Statistical Report on the Health of First Nations in British Columbia, 2001.

## Why do Aboriginal People Have Poorer Health Status?

Why do Aboriginal people, as a group, have poorer health status? This is a complex issue. Poor health status reflects the historical disadvantages experienced by Aboriginal communities. Colonialism, racism, diseases, and the loss of cultural and political institutions have resulted in powerlessness and dependency, from which they have only recently emerged, and with the legacy of which they still must struggle. The residential school experience and the forced separation of families in the name of integration resulted in family disruption. Poverty, unemployment and inadequate housing all contribute to ill health for Aboriginal people, as for others. When Aboriginal communities experience difficulties, they have not always been given the resources and supports they need to ensure that individuals and families can achieve optimal health. Access to primary health care has been deficient. Finally, the loss of a traditional lifestyle and traditional foods has had a particularly deleterious effect on Aboriginal people, contributing to high rates of obesity and diabetes.

The measures presented in this chapter are based on standards and values established by the general (non-Aboriginal) population. If we had other measures, developed by Aboriginal people, we might find a different picture. However, based on available information, we conclude that there remain large inequities. Why are there such large differences in the health status, when both groups (Aboriginal and non) share the same province and have, in theory, access to a universal health care system? The following chapter begins to answer this question, by considering community environments.

## What Targets Are Achievable?

Comparable health status between Aboriginal people and the general population is the only ethically-acceptable target. Questions remain about how quickly this general target can be achieved, and about which specific targets ought to be aimed for first.

In its 2002-03 – 2004-05 *Service Plan*, the B.C. Ministry of Health Services adopted a target to reduce infant mortality in the Status Indian population to a rate equal to the general population by March 2005. This target is achievable, based on the improving trend in the 1990s. The Ministry also adopted a long-term target to achieve comparable health status between Aboriginal people and the general population (B.C.

Ministry of Health Services, 2002). As a requirement of the *Budget Transparency and Accountability Act*, government will report on progress made when each year's public accounts are presented.

## What Actions Can We Take?

Governments and communities can:

- Implement programs or develop policies to tackle the major threats to Aboriginal health, which include smoking, Fetal Alcohol Syndrome, SIDS, teen suicide, injuries, mental health problems, and HIV/AIDS.

Aboriginal groups can:

- Work with provincial and national health authorities to find ways to record information about all groups of Aboriginal people, including non-status First Nations and Métis people, in health databases. One approach would be to record Aboriginal identity (similar to the Census question) on all health records.
- Work towards provision of Band-specific or community level health data, where feasible.

# 4. Community Environments

*This chapter describes the social and economic environments in which Aboriginal peoples live – perhaps the most important influences on health. Aspects discussed include community identity, employment, income, community stress, and community control and empowerment.*

Although much work is needed to bring Aboriginal communities up to the standard of living of other British Columbians, progress is being made. It is important to note that Aboriginal communities are not all the same - some groups and areas of the province enjoy a better standard of living than others.

## Highlights

- The Aboriginal population is culturally diverse. Language groups, bands, and residence (on- versus off-reserve) are some of the groupings used to describe Aboriginal communities.
- The Aboriginal population is geographically dispersed. About one-third live in Greater Vancouver, Victoria, or the Fraser Valley. Another third live in the Thompson, Okanagan, Kootenays and Central/Upper Vancouver Island regions, while almost one-third live in the northern areas of the province.
- The Aboriginal population has levels of employment, income, and educational attainment that are about 80 per cent of those of other British Columbians, based on Census data about people who report Aboriginal identity.
- Compared to other B.C. children and youth, Aboriginal children and youth are 7 times as likely to be in government care and 5 times as likely to be in a youth justice institution. These high rates reflect the historical disadvantage experienced by Aboriginal communities and the legacy of the residential school system.
- Suicide rates are lower for First Nations bands that have made progress toward self-government and land claims, have cultural facilities, and have control over local services such as health care, education, police, and fire. The more "protective factors" in a community, the lower its suicide rate.

- Aboriginal people have access to a complex array of federal and provincial programs. The need for the social safety net will continue to grow, unless the underlying causes of social and economic disadvantages can be corrected.
- Aboriginal communities are beginning to have more governance over the programs and services they receive. Genuine decision-making power and a collective sense of control over a community's destiny are key to economic and social development.

## Communities

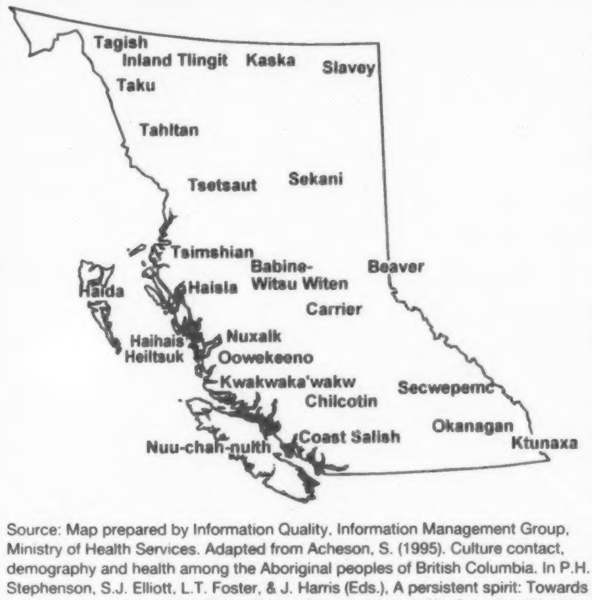
As people know from their own experiences, and as research clearly shows, the community environment is an important influence on people's health. But what exactly do we mean by "community"? Dictionaries tell us it is a group of people living in the same area and under the same government; a class or group having common interests or likes.

Aboriginal communities involve families and social units with shared language, values and beliefs, traditions and practices, traditional knowledge, relationship to land and water, artistic expression, and spirituality. These do not necessarily coincide with boundaries identified by political jurisdictions, e.g., municipal boundaries. Unfortunately, when it comes to statistical data, the term community often means community of residence.

Although Census data show that the majority of Aboriginal people use English as their principal language, language remains an important tie that binds Aboriginal communities together. Twenty-five Aboriginal languages are spoken in British Columbia (Figure 4.1), about half of all the Aboriginal languages in Canada. B.C.'s terrain, with its numerous mountain ranges and other physical barriers, was an important factor in the evolution of the province's many languages, each with its own unique culture and group identity. Loss of language can severely handicap transmission of culture. As of 1996, only 3 out of Canada's 50 Aboriginal languages had large enough populations to be considered secure from the threat of extinction (Norris, 1998).

**Fig. 4.1**

**Major Language Groups in British Columbia**



Source: Map prepared by Information Quality, Information Management Group, Ministry of Health Services. Adapted from Acheson, S. (1995). Culture contact, demography and health among the Aboriginal peoples of British Columbia. In P.H. Stephenson, S.J. Elliott, L.T. Foster, & J. Harris (Eds.), A persistent spirit: Towards understanding Aboriginal health in British Columbia (pp. 1-42). Canadian Western Geographical Series Volume 31. Victoria, B.C.: University of Victoria, Department of Geography.

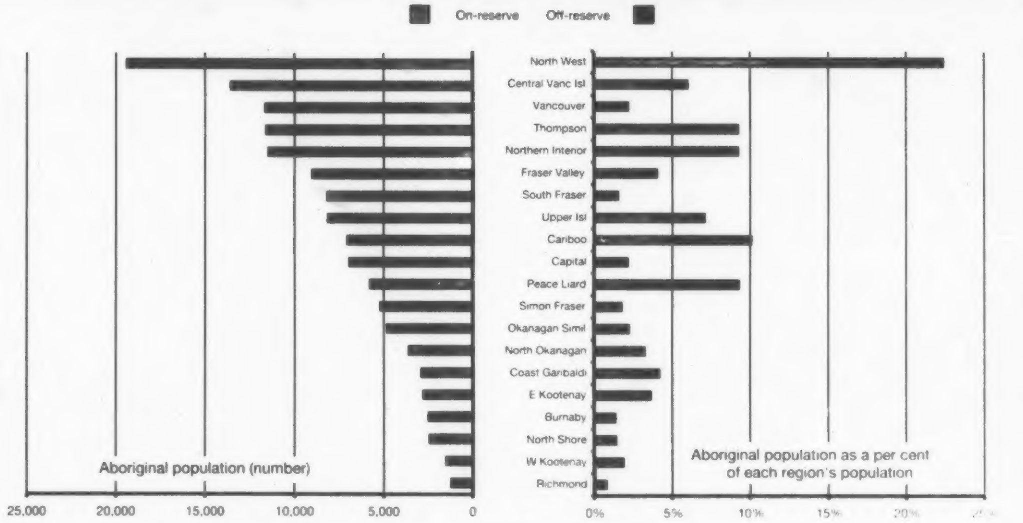
While Aboriginal peoples traditionally lived in small, self-governing groups, Indian Bands are groupings constructed by the federal government for political and administrative purposes. There are 200 registered Bands in B.C., with 492 communities. Most of these communities are reserves. The others are settlements on Crown land, which are treated as reserves for the purposes of receiving services from federal agencies (Meenakshi Dawar, personal communication, August 3, 2001).

Bands in B.C. range in size from fewer than 50 to more than 2,500 members. B.C. is unusual in that most bands are small, having between 100 and 1,000 members. The average size is about 500. Each band has its own governing band council, usually consisting of one or more chiefs and several councillors. This is the form of government required by the *Indian Act*. In some communities, there are competing or complementary traditional governing structures. Community members choose the chief and councillors by election, or sometimes through traditional custom. The members of a band generally share common values, traditions and practices rooted in their ancestral heritage. Today, many bands prefer to be known as First Nations. A Tribal Council is a regional group of First Nations members that deliver services to a group of First Nations; there are 22 Tribal Councils in B.C. For a list of Bands and Tribal Councils by health region, see Appendix F. It should be noted that the Province of British Columbia has reorganised to five health authorities from 20 health regions (see Appendix G). Indicators of Aboriginal health and well-being by the new health authorities will be available from the Office of the Provincial Health Officer at a later date.

Based on region of residence, the Aboriginal population is geographically dispersed. About one-third live in Greater Vancouver, Victoria, or the Fraser Valley. Roughly one-third live in the Thompson, Okanagan, Kootenays and Central/Upper Vancouver Island regions, while almost one-third live in the northern areas of the province. In the northern areas, though, Aboriginal people comprise a much greater proportion of regional populations. Twenty-two per cent of the North West population are Aboriginal, compared to only 0.8 per cent in Richmond (Figure 4.2).

Fig. 4.2

Aboriginal Population by Health Region and as a Per Cent of Total Population, 1996



Source: Statistics Canada. 1996 Census. Semi-custom Area Profile. Data obtained from the Health Data Warehouse. B.C. Ministry of Health Services

"On-reserve" and "off-reserve" is another geographic distinction that is often made with respect to the First Nations population. On-reserve refers to people living on land set aside by the federal government for the use and occupancy of an Indian group or band. Off-reserve is a term used to describe First Nations who are living off of the reserve.

Of the on-reserve Registered Indian population in B.C., 37 per cent live in rural areas. A further 6 per cent live in remote areas (located over 350 km from the nearest service centre having year-round road access), while nearly 16 per cent live in special access zones (areas with no year-round road access to a service centre) (Indian and Northern Affairs Canada, March 2002). Thus, although the reserve may be their home community, many people may leave to find work or educational opportunities. Paradoxically, those who leave the reserve are no longer eligible for some of the benefits previously available to them.

Status Indian women are less likely to live on-reserve than men, particularly during their childbearing and childrearing years. Young women start to move off-reserve in their teens, while men, on average, wait until their twenties. As both men and women reach their 50s, they are more likely to move back to their reserves (BC STATS, 1998).

Vancouver has a significant Aboriginal population – between 11,000 and 15,000 according to the Census, although Aboriginal groups estimate that the population is actually much higher. Many have moved to Vancouver from all regions of B.C., as well as from Alberta, Ontario, and other provinces. Most health statistics are based on people's place of residence, rather than their place of birth or family origin. Thus, people who move to Vancouver will be counted in health statistics for the Vancouver area.

There is not a specific area or neighbourhood in Vancouver where Aboriginal people live (such as Chinatown for the Chinese community), although many live between Cambie and Nanaimo Streets on the East Side of Vancouver (The Aboriginal Community in Vancouver, 2002) – Canada's poorest neighbourhood. Alcohol and drug addiction, prostitution, homelessness, and high rates of HIV/AIDS transmission, hepatitis, syphilis, and tuberculosis are some of the big challenges facing Aboriginal people in this downtown Vancouver neighbourhood. The Vancouver Agreement is a formal commitment by the federal government, the province of B.C., and the City of Vancouver to work together to support sustainable economic and social development in the Downtown East Side, and numerous community agencies are working to improve the quality of life for this community (see Sheway, page 59, for one example.)

## Families

Aboriginal families tend to be larger than non-Aboriginal families, according to Canada Census data for B.C. The average size of Aboriginal families on-reserve is 4.2 people, and off-reserve is 3.5, compared with a family size of 3.1 for the province overall. Single-parent families are also more common, especially in urban areas. About one-third of Aboriginal children under age 12 live in single-parent families, twice the rate in the general B.C. population. In urban areas, almost half of Aboriginal children live in a single-parent family arrangement.

## Employment

Employment prospects facing the Aboriginal population are much worse than for other British Columbians. The unemployment rate was 25 per cent among the Aboriginal population in 1996, and this figure does not include those who are no longer actively looking for a job, who are not considered to be in the labour force.

Time trend data for B.C. are not available, but a national report concluded that no progress has been made in closing the gap in unemployment between Aboriginal people and the overall population (Mendelson & Battle, 1999). With the working age population growing over the next decades, the issue of employment opportunities for Aboriginal people will be of critical importance.

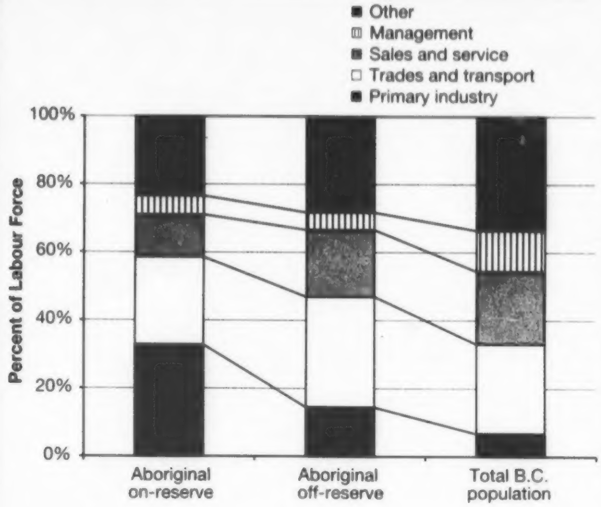
### Economic Opportunity, Food, and Aboriginal Health

**As well as having poorer health status than the general population, Aboriginal people, as a group, face much higher rates of unemployment and poverty, especially if they live on reserve.**

**It is often difficult to identify sources of sustainable economic activity that can provide well paying jobs to Aboriginal people living in small, remote communities. One opportunity that may become more important in the future is growing or raising traditional food items for sale. Fish and shellfish can be farmed, as well as caught or gathered. This type of renewable resource activity may offer some Aboriginal communities an opportunity to gain economic and employment benefits at the same time as they develop locally available food supplies for their own use. This could improve the health status of these communities, directly and indirectly, through nutritional and economic benefits.**

Fig. 4.3

Labour Force by Type of Occupation — Men Age 15 and Over, 1996



Source: Statistics Canada.1996 Census. Semi-Custom Area Profile. Data obtained from the Health Data Warehouse, B.C. Ministry of Health Services.

## Occupations

Aboriginal persons who find work are often employed in lower paying or more hazardous jobs, typically in primary industries (men) or service jobs (women). Figure 4.3 shows the occupational mix for Aboriginal men compared to the total B.C. population, with Aboriginal men over-represented in primary industry and under-represented in management. Within the trades and transport category, the most common occupation for Aboriginal men is "trades helpers and labourers."

About three-quarters of Aboriginal women work in three occupational groups: sales and service, clerical and secretarial, and social science and education (which includes social workers and teachers). Aboriginal women are under-represented in the

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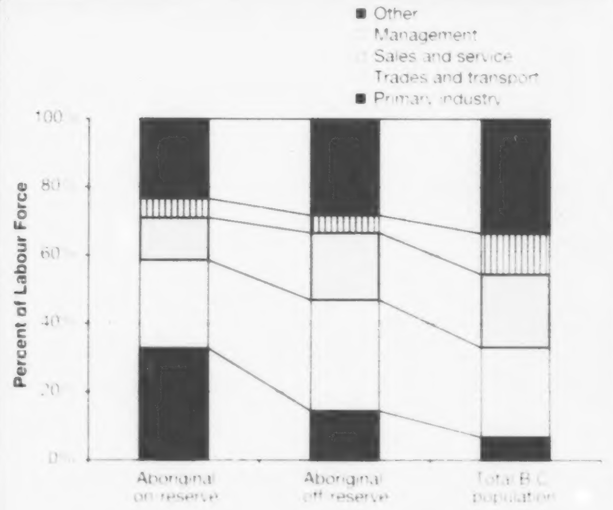

Source: Statistics Canada 1996 Census, Semi-Custom Area Profile. Data obtained from the Health Data Warehouse, B.C. Ministry of Health Services.

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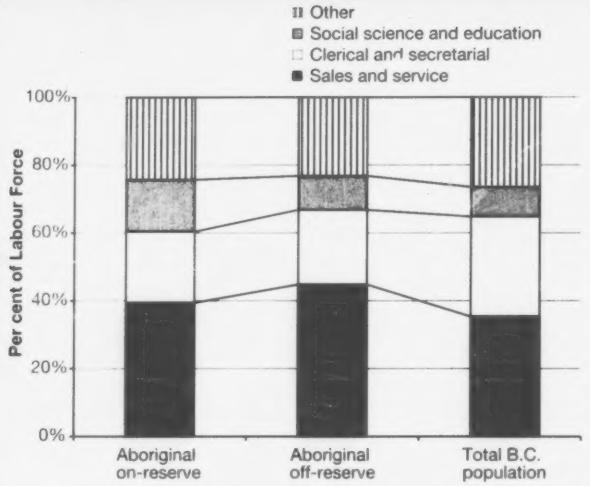
Fig. 4.4

Labour Force by Type of Occupation — Women Age 15 and Over, 1996



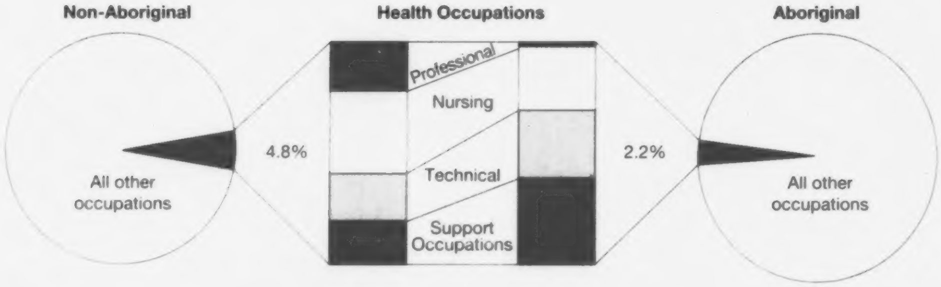
Source: Statistics Canada. 1996 Census, Semi-Custom Area Profile. Data obtained from the Health Data Warehouse, B.C. Ministry of Health Services.

health and scientific professions, but otherwise, their distribution in occupations is similar to that of B.C. women overall (Figure 4.4).

Health occupations provide a specific example of differences in occupations. Aboriginal people are under-represented in the "professional" category, which includes doctors, dentists, and pharmacists, with most Aboriginal health workers falling into the "support" occupations such as aides, orderlies, and porters (Figure 4.5). Efforts are being made to increase Aboriginal participation in health training programs; see First Nations Health Careers Program, page 99, for one example.

Fig. 4.5

Population in Health Occupations, B.C., 1996



Source: 1996 Census, Semi-Custom Area Profile, Statistics Canada. Data obtained from the Health Data Warehouse, B.C. Ministry of Health Services.

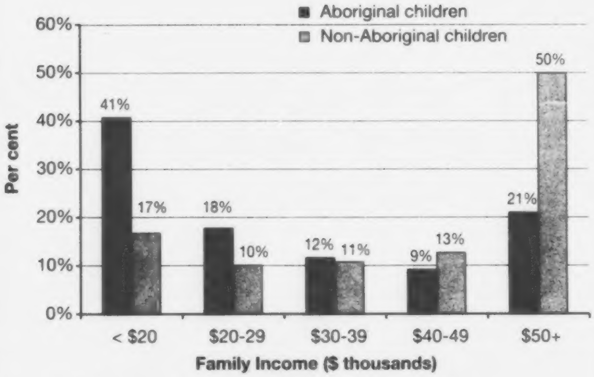
High unemployment combined with under-representation in certain occupational sectors could reflect a shortage of jobs, a mismatch between jobs and educational qualifications and work experience, and/or a lack of child care. They may also reflect labour market discrimination. In B.C., 15 per cent of First Nations people who had looked for a job in 1990-91 felt that they faced racial discrimination. Among those living on-reserve, the figure was slightly higher, at 19 per cent (13 per cent for those living off-reserve) (B.C. Social Program Renewal Secretariat, 1995).

## Income

Aboriginal people with paid employment earn substantially less than the provincial average. A portion of this difference is due to a predominance of part-time or part-year work among Aboriginal people. Just over two-thirds of Aboriginal workers work part-time or part-year, compared to about one-half of other B.C. workers. However, the average employment income was lower than the B.C. average, even among Aboriginal people who worked full-time.

Fig. 4.6

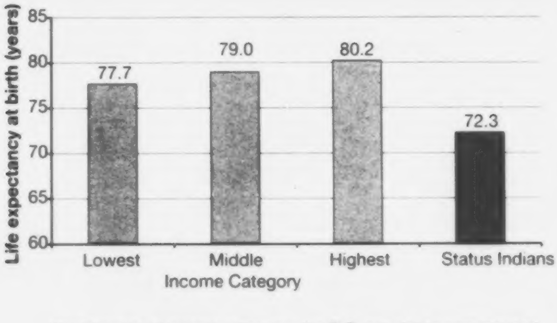
Children Under 12 Years of Age by Family Income, B.C. 1996



Source: Statistics Canada. 1996 Census Custom Tabulation GO0416.

Fig. 4.7

Life Expectancy at Birth by Neighbourhood Income Category, B.C. Population, 1996 and Status Indians, B.C. 1996-2000



Neighbourhood income category - the B.C. population was grouped into 3 categories (terciles), after ranking enumeration areas by income per single-person equivalent within each Census Metropolitan Area.

Sources: (1) BC Population: Statistics Canada. (May 2002). Life Expectancy at Birth, by Neighbourhood Income Tercile, Canada and Provinces, 1996. Unpublished table provided by Russell Wilkins, Health Analysis and Measurement Group. Original Data Source: Deaths 1996-97. Census Population 1996, Statistics Canada. (2) Status Indians: Life expectancy at birth, 1996-2000. B.C. Vital Statistics Agency. Unpublished tables. June 2002.

In 1996, Aboriginal men working full-year full-time in B.C. earned, on average, $35,384, about 79 per cent of what non-Aboriginal men earned ($44,947). The wage gap for Aboriginal women was slightly less – they earned 83 cents for every dollar earned by non-Aboriginal women. In part, Aboriginal workers have lower incomes because they work in lower paid and lower status occupations and have fewer educational qualifications. For Canada as a whole, it is estimated that differences in work patterns, age and education account for about 60 per cent of the total difference between the average earnings of the Aboriginal population and the national average (Statistics Canada, May 1998).

Given that employment rates are low and incomes are relatively poor, it is not surprising that a large proportion of the Aboriginal population lives below the poverty line and that many rely on government assistance of some type. Child poverty is a particular concern, because it is well-established that child poverty is associated with a variety of poor outcomes later in life, including abuse, poor school performance, criminal activity, teen pregnancy, and unemployment. Forty-one per cent of Aboriginal children live in families with incomes under $20,000, compared to 17 percent for other B.C. children (Figure 4.6).

There is strong evidence that lower incomes are linked to lower life expectancies. Data for B.C. show that even the persons in the lowest income category have 5.4 more years of life expectancy than Status Indians (Figure 4.7). Life expectancy for British Columbians in the lowest income category was 77.7 years in 1996, compared to 72.3 years for Status Indians in 1996-2000.

## Income Assistance

Aboriginal people have access to a complex web of federal and provincial programs. Some programs are for Aboriginal peoples generally, some are for Status Indians only, and others are for all residents of B.C. For on-reserve Status Indians, the federal government provides social assistance directly. For other B.C. residents (Aboriginal and non-Aboriginal), income assistance is provided as part of the provincial income assistance program. We can't gauge how much the Aboriginal population relies on income assistance, because the province cannot require people to identify as Aboriginal in order to qualify, nor are figures available for those on unemployment insurance. However, Census data shows that reliance on government transfer payments, which includes income assistance and unemployment insurance, is fairly high. For Aboriginal people on-reserve, 28 per cent of individuals' income comes from government sources.

### Community Freezer in Kuujjuaq

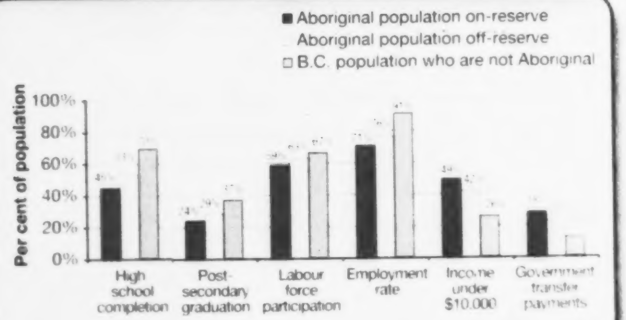
The village of Kuujjuaq, in the territory of Nunavut, has a community freezer filled with frozen caribou. When a community member hunts more than their families need, they fill the freezer with meat. Anyone in the community is free to take the meat, whenever they are in need of food. No records are kept of the meat that is donated or taken from the freezer.

The community freezer is a practical, culturally-appropriate way to see that everyone has enough to eat. It builds on the tradition of food sharing, uses modern technology, and provides an alternative to food banks in a simple, non-judgmental way.

Story told in *A Dialogue with His Excellency John Ralston Saul*, Who Cares? Creative Responses to Social Obligations, Monograph 2, April 21, 2001. http://www.philia.ca

**Fig. 4.8**

**Indicators of Living and Working Conditions, Aboriginal and Non-Aboriginal Population Age 15 and Over, B.C., 1996**



Government transfer payments - per cent of individuals' income from government sources (unemployment insurance, income assistance, child tax credits, OAP, CPP, etc.).
Source: Statistics Canada, 1996 Census, Semi-Custom Area Profile. Data obtained from the Health Data Warehouse, B.C. Ministry of Health Services

## Education

Based on Census data, the Aboriginal population, especially those living on reserve, has levels of formal education that are below the provincial average (Figure 4.8). Those living closer to their traditional land base may feel that "European" school curricula are not relevant, or those who are interested may have re-located to get an education. School retention rates and graduation rates for Aboriginal students have been improving over the years. More detailed data are presented in the section on Learning Opportunities (Chapter 5, page 60).

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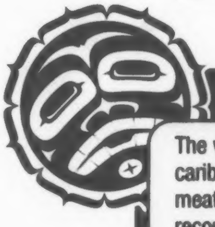

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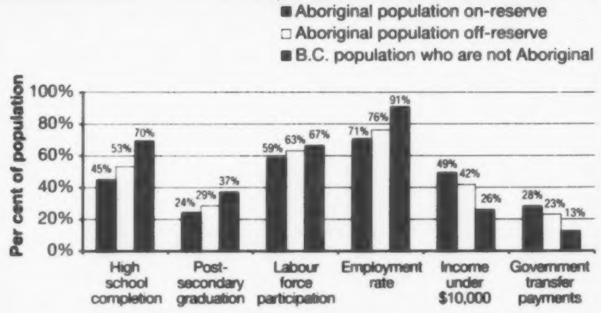

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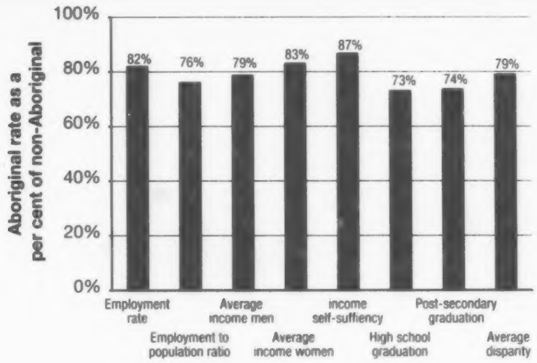
Fig. 4.9

Disparity between Aboriginal and Non-Aboriginal Population, Seven Census Measures of Socioeconomic Conditions, B.C. 1996



Employment rate: Proportion of labour force age 15 and over employed. Employment to population ratio: Proportion of population age 15 and over employed.
Average income: Average employment income among full-year full-time workers age 15 and over.
Income self-sufficiency: Proportion of total income that comes from sources other than government transfer payments.
Source: Statistics Canada. 1996 Census, Semi-Custom Area Profile. Data obtained from the Health Data Warehouse, B.C. Ministry of Health Services.

## Relationship to Health

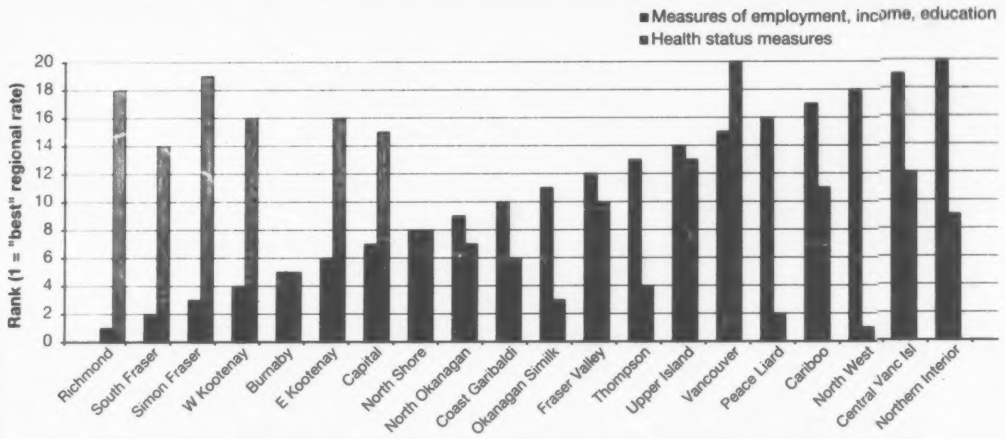
On average, the Aboriginal population has levels of employment, income, and educational attainment that are about 80 per cent of those of other British Columbians, based on Census data about people who report Aboriginal identity (Figure 4.9).

Previous reports by the Provincial Health Officer have shown a relationship between socio-economic conditions and the health status of communities. In general, the better the ranking on indicators such as education, employment and income, the lower the rate of premature death (Provincial Health Officer, 2000). (Potential Years of Life Lost, a measure of premature death, is well-accepted as a proxy indicator for overall health status.) For the Aboriginal population, health status is not clearly linked to a region's socio-economic conditions, based on Census data (Figure 4.10). North West, Peace Liard, Okanagan Similkameen, and Thompson regions, which have the best health status rankings, are at or below average in terms of socio-economic conditions. This does not mean that socio-economic conditions do not matter. Some possible explanations are:

- Problems with data quality and comparability, e.g., incomplete or inaccurate data, fluctuation in rates due to small numbers in some regions, differences in populations covered by socio-economic data (Aboriginal population) and health data (Status Indians only).
- Problems with regional boundaries. Health regions are administrative jurisdictions, not Aboriginal communities. It is difficult to measure the impact of community-level variables on individual or community health with data for real communities.
- Problems with the measures used. The standard Census measures of employment, income, and educational attainment may not accurately reflect socio-economic conditions in Aboriginal communities. Other community factors may be contributing to the level of health.

Fig. 4.10

Relationship between Socioeconomic Measures and Health Status, Aboriginal Population
B.C. Health Regions



Regional rankings on 7 Census measures of employment, income, and educational attainment and 5 health status measures (infant mortality, life expectancy of men and women, and potential years of life lost due to natural and external causes). Scores were calculated based on a formula that considers how much each region differs from the median value.
Sources: (1) Statistics Canada. 1996 Census. (2) B.C. Vital Statistics Agency, Ministry of Health Services.

## Community Control

Powerlessness experienced as a result of colonialism, racism and loss of cultural identity are important influences that have affected the health of indigenous peoples world-wide. The past decades have produced strong evidence that the solution lies in giving economic and political control to indigenous communities, so that they are able to address the underlying conditions that affect their health. Around the world, indigenous peoples have struggled to gain control over their land and lives, and recognition of their rights. This inherent right of self-determination arises from their status as self-governing peoples prior to colonization of their own territories (Pritchard, 2001).

Many Aboriginal communities in B.C. have begun to make improvements in their living and working conditions. Community self-governance, including local control over local health and social services, is one aspect of self-determination. About 65 per cent of the province's registered Aboriginal population are currently engaged in treaty negotiations, which deal with issues such as land ownership, self-government, wildlife and environmental management, sharing resources, financial benefits, and taxation. More than half (58 per cent) of bands have taken responsibility for community health services provided on reserve, or are in the process of doing so. About 30 per cent of Aboriginal students on reserve are enrolled in band schools, and 56 per cent of Aboriginal communities have assumed some level of responsibility for child and family services. These figures show that the majority of on-reserve communities are on the road to self-government.

Suicide rates have been called "indicators of needy communities" (Cooper, 1995). A 2001 study showed that suicide rates are lower for First Nations bands that have made progress

### Shulus Community Gardens

**Shulus Community Gardens began as a work experience for five individuals from the Lower Nicola Band, near Merritt, B.C. Since then, it has evolved into a self-supporting commercial venture, with benefits to participants and the community.**

**The Shulus Garden Demonstration Project was created in 1998, when the Lower Nicola Band recognized that community members were experiencing high unemployment rates and a lack of job skills. A community garden was set up on 4.5 acres of land donated by the Band and the Shulus Cattle Company. A crew of workers cultivated the gardens, with start-up funding from Indian and Northern Affairs Canada, the B.C. Ministry of Agriculture and Food, and the Interior Salish Employment and Training Program.**

**Two greenhouses were built in May 1999, in partnership with Shell Canada. These greenhouses are able to produce 15 tons of vegetables per year. In 2001, the eight band members who were employed by the project tended the gardens and worked on ways to market their products. A farmers market has been established, along with a "good food boxes program" for the local friendship centre.**

**The Lower Nicola Band planned on the project turning into a self-supporting commercial business after five years, and it has succeeded. The project depended on funding from the Federal Income Security Reform Initiative during its first three years. Since then, it has become more self-supporting, and in 2002, its fifth year of operation, it will be fully independent. Future plans are to increase the garden size and build more greenhouses.**

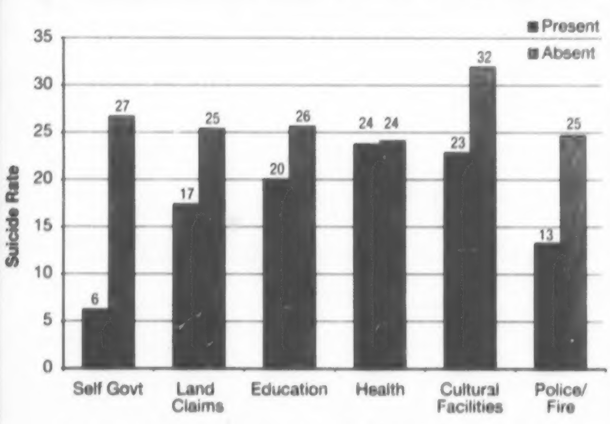
toward self-government and land claims, have cultural facilities, and have control over local services such as health care, education, police, and fire (Figure 4.11). The more "protective factors" in a community, the lower its suicide rate. Where all six factors were present, the suicide rate was zero in the study period (Figure 4.12). When additional protective factors were introduced (women in government, local control over child protection services, and participation in the B.C. treaty process), the same pattern of reduction in suicide rates was shown (Lalonde, 2001).

This study provides further evidence that variability in First Nations suicide rates is associated with community efforts to promote culture and to exert local control over important aspects of community life. This fits with what we know about the factors that influence health – individuals and communities are healthier when they are empowered and have a sense of control over their lives and their destinies.

Interestingly, like the analysis of Census data in Figure 4.10, the Lalonde analysis did not show a clear relationship between suicide rates and levels of income, employment, or

Fig. 4.11

Suicide Rates by Community Control Factors, First Nations Communities in B.C.



Community control : First Nations Bands that have made progress toward self-government and land claims, have cultural facilties, and have control over local services such as health care, education, police and fire.
Source: Suicide Rates Among First Nations Persons in British Columbia, 1993 - 2000. Prepared by Christopher E. Lalonde for the Office of the Provincial Health Officer, 2001.

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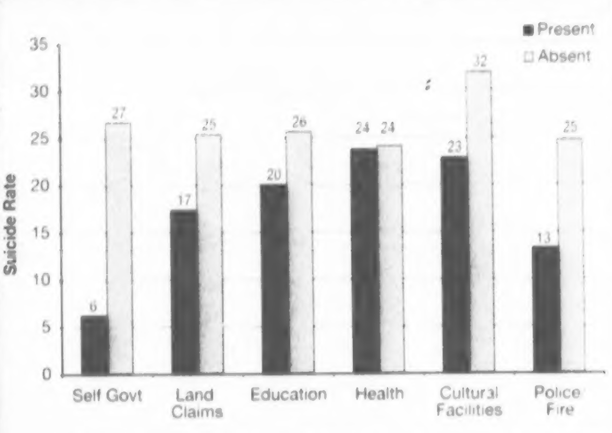
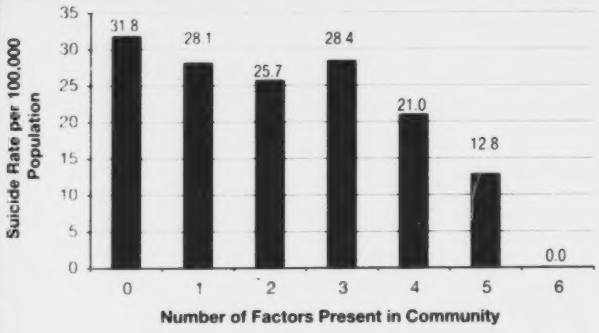


Community control : First Nations Bands that have made progress toward self government and land claims, have cultural facilties, and have control over local services such as health care, education, police and fire.
Source: Suicide Rates Among First Nations Persons in British Columbia, 1993 - 2000. Prepared by Christopher E. Lalonde for the Office of the Provincial Health Officer, 2001.

**Fig. 4.12**

Suicide Rates by Number of Protective Factors Present, First Nations Communities in B.C.



Protective factors : progress toward self-government and land claims, local control over community health services, education, and police and fire services, and presence of cultural facilities.
Source: Suicide Rates Among First Nations Persons in British Columbia, 1993 - 2000. Prepared by Christopher E. Lalonde for the Office of the Provincial Health Officer, 2001.

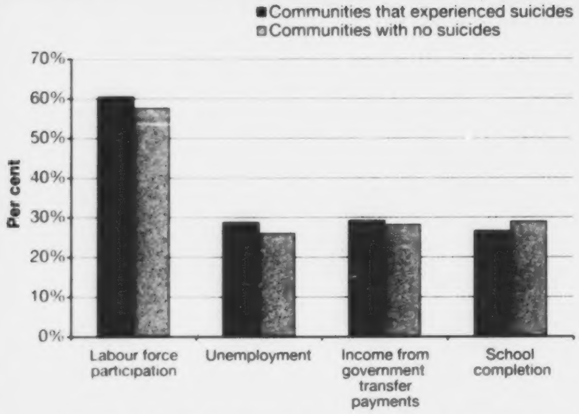
labour force skill level. Rates of unemployment and dependency on government transfer payments were slightly lower, and school completion rates slightly higher, in communities with no reported suicides. Labour force participation was slightly higher in communities that experienced suicides (Figure 4.13). None of these differences were statistically significant.

## The Legacy of Residential Schools

The residential school system, which segregated Aboriginal children from their families, was in place for more than a century. British Columbia had the most residential schools in the country, as many as twenty-two (Aboriginal Health Association of B.C., 1999). Although the last residential school closed in 1984, approximately 35,000 British Columbians are residential school survivors, and the effects on people's lives have not ended (Provincial Residential School Project, 2001).

**Fig. 4.13**

Socioeconomic Conditions and Suicide, First Nations Communities in B.C., 1993 - 2000



Source: Suicide Rates Among First Nations Persons in British Columbia, 1993 - 2000. Prepared by Christopher E. Lalonde for the Office of the Provincial Health Officer, 2001.

Studies have described how children in residential school lost their cultural identity, self-respect, and connections to their family, suffered sexual abuse, and had difficulties readjusting after going back home (Assembly of First Nations, 1994; Nuu-chah-nulth Tribal Council, 1996). Many people who attended the schools show symptoms similar to those of post-traumatic stress disorder: recurrent intrusive memories, nightmares, flashbacks, and avoidance of stimuli associated with the residential school experience (Brasfield, 2001). These lingering effects are far-reaching, and high levels of suicide, alcoholism, and family violence in some Aboriginal communities have been attributed to this dark chapter in Canadian history.

The social and economic measures in this report provide a lens for reviewing health issues, but they cannot fully explore or demonstrate the powerful role that history plays on the health of Aboriginal people.

## Other Community Measures

Rates of crime, abuse, and children apprehended by child protection agencies are some of the measures used to gauge the levels of security and stress that families and communities are experiencing.

### Children In Care

Traditionally, caring for Aboriginal children was a communal responsibility. Over the past two centuries, as Aboriginal peoples have experienced major social and cultural change, their ability to provide a safe and healthy environment for their children has been jeopardized.

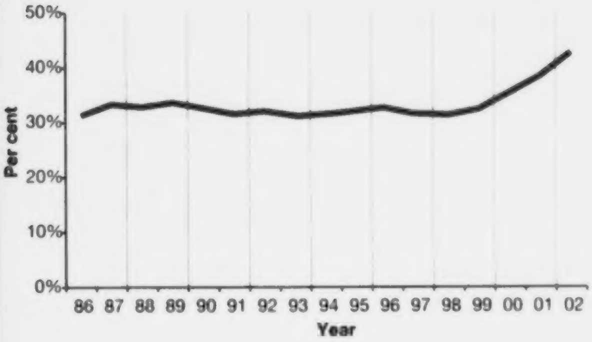
As of March 31, 2002, there were 4,307 Aboriginal children in the care of child welfare authorities. A disproportionate number of Aboriginal children and youth are in government care, especially in the younger age groups. Until recently, about one-third of children and youth in care have been Aboriginal, and this pattern remained fairly consistent over the years. The proportion of children in care who are Aboriginal has been increasing since 2000, reaching 43 per cent in 2002 (Figure 4.14). About one-third of the increase is thought to be due to better recording by staff, while two-thirds reflects a real increase in the number of Aboriginal children in care (B.C. Ministry of Children and Family Development, June 2002).

Provincially, it is estimated that 5.2 per cent of Aboriginal children are in care, compared with 0.7 per cent of non-Aboriginal children. This means that Aboriginal children are more than 7 times as likely to be placed in government care than non-Aboriginal children. Regionally, Vancouver has the highest rate of children in care (Figure 4.15). These figures are estimates, based on the population age 0 to 18 whose ethnic origin was "Aboriginal" in the 1996 Census.

The high rate of Aboriginal children in care reflects the historical disadvantages experienced by Aboriginal communities. Residential schools caused generations to grow up without opportunities to develop parenting skills. Poverty, relative isolation, unemployment, and inadequate housing all contribute to family disruption. When Aboriginal families experience difficulties, they have not always been given the resources and support they need to ensure that children are raised in their home communities and culture.

**Fig. 4.14**

**Aboriginal Children in Care as a Proportion of All Children in Care, B.C., 1986 - 2002**



Source: B.C. Ministry of Children and Family Development.
Note: Figures are as of March 31 of each year.

There is anecdotal evidence that there is an under-counting problem with regard to Aboriginal children. Non-Aboriginal social workers are not always able to correctly identify Aboriginal children, especially Métis children. Preliminary research in one region suggests that as many as 60 per cent of children in care province-wide may be Aboriginal (B. Leslie, personal communication, January 9, 2002).

### A Gathering Place for Children

In 1993, the Chief and Council for the Campbell River First Nation realized there was a very large group of children aged three to four without preschool facilities in their community. The Gengenlilas Preschool (now named the Kwinwatsi Preschool) is the successful outcome of their attempt to provide these children with both a healthy start and a link to Aboriginal culture.

A decision was made to develop the preschool in conjunction with the building of their Big House. Since then, the community has mobilized around the preschool. Chief and Council raised funds to build the preschool's home, which is attached to the back of the Big House. Funding has been provided from Health Canada's Brighter Futures Program, Aboriginal Head Start, and the First Nations Child Care Initiative of the Assembly of First Nations. Western Forest Products donated logs toward the building's construction. Even though Kwinwatsi has only a small budget, Chief and Council and community members continue to make the preschool a success by providing additional funding as needed and by donating toys.

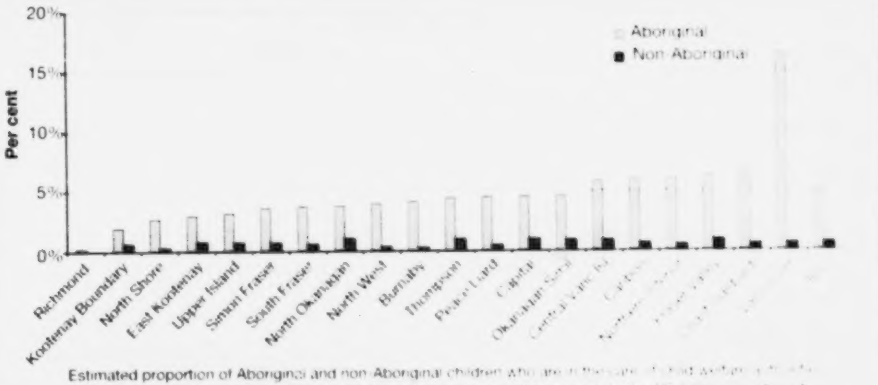
First Nations children who attend Kwinwatsi are taught about their culture. Campbell River stories, dances, and songs are intermixed with play. Members of the community play a large part in the children's cultural education, and Elders spend time with the preschool children, sharing stories of their heritage and traditional tales.

The most consistent event in some of these children's lives is their daily attendance at the preschool. It provides them with stability and a routine. In addition, by allowing parents more time to work, they are able to provide a more comfortable home for their small children. This economic boost is beneficial for the whole community.

Sixty to 70 per cent of eligible children are now enrolled in Kwinwatsi. Local kindergarten teachers have noticed a difference. Teachers say that children who attend Kwinwatsi are more successful, both socially and academically, than those children who have not attended preschool. In addition, parents' overall interest in their children's education has increased.

**Fig. 4.15**

### Estimated Proportion of Aboriginal and Non-Aboriginal Children Who are in Care, B.C. Health Regions, March 2002



Estimated proportion of Aboriginal and non-Aboriginal children who are in the care of child welfare [illegible] (including Aboriginal agencies). Population estimates are based on responses to the 1996 Census [illegible] questions and annual growth rates in the Status Indian population for subsequent years. For [illegible] the estimation method, see the Ministry of Children and Family Development's Jan. 2002 [illegible] Health and Well-being of Aboriginal Children and Youth in British Columbia, pages 57 and [illegible]
Sources: (1) Number of children in care from Data Services, B.C. Ministry of Children and Family [illegible] Unpublished tables, June 25, 2002. (2) Population estimates from 1996 Census and B.C. Vital Statistics estimates for the Status Indian population.

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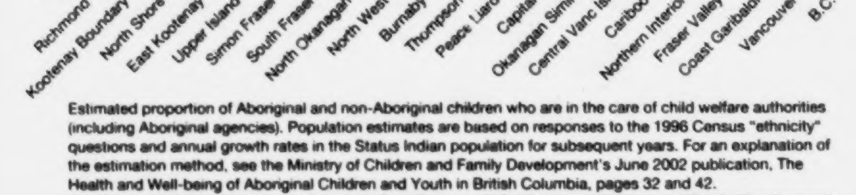
First Nations children who attend Kwinwatsi are taught about their culture. Campbell River stories, dances, and songs are intermixed with play. Members of the community play a large part in the children's cultural education, and Elders spend time with the preschool children, sharing stories of their heritage and traditional tales.

The most consistent event in some of these children's lives is their daily attendance at the preschool. It provides them with stability and a routine. In addition, by allowing parents more time to work, they are able to provide a more comfortable home for their small children. This economic boost is beneficial for the whole community.

Sixty to 70 per cent of eligible children are now enrolled in Kwinwatsi. Local kindergarten teachers have noticed a difference. Teachers say that children who attend Kwinwatsi are more successful, both socially and academically, than those children who have not attended preschool. In addition, parents' overall interest in their children's education has increased.

Fig. 4.15

Estimated Proportion of Aboriginal and Non-Aboriginal Children Who are in Care, B.C. Health Regions, March 2002



Estimated proportion of Aboriginal and non-Aboriginal children who are in the care of child welfare authorities (including Aboriginal agencies). Population estimates are based on responses to the 1996 Census "ethnicity" questions and annual growth rates in the Status Indian population for subsequent years. For an explanation of the estimation method, see the Ministry of Children and Family Development's June 2002 publication, The Health and Well-being of Aboriginal Children and Youth in British Columbia, pages 32 and 42.

Sources: (1) Number of children in care from Data Services, B.C. Ministry of Children and Family Development Unpublished tables, June 25, 2002. (2) Population estimates from 1996 Census and B.C. Vital Statistics estimates for the Status Indian population.

The Ministry of Children and Family Development is improving its ability to identify and care for Aboriginal children and report on Aboriginal statistics, including differentiating between First Nations, Métis, and Inuit children. In March 2001, Aboriginal leaders and government signed an agreement that firmly establishes a commitment to reduce the number of Aboriginal children and youth in care and to return Aboriginal children to their home communities. At that time, 493 children (12 per cent of Aboriginal children in care) were cared for by delegated Aboriginal agencies. As more Aboriginal agencies assume responsibility for children in care, the number of children in care may go up, at least in the short term. Community members may feel somewhat more disposed to allowing an Aboriginal child welfare agency to take their children into care as opposed to the Ministry. As well, delegated agencies are in much closer physical proximity to families.

What do we know about health outcomes of Aboriginal children in care? A review by the Provincial Health Officer in 2001 found that Aboriginal youth in care (age 15 to 18) had a death rate 2.7 times higher than non-Aboriginal youth. In the younger (age 0-14) age groups, however, death rates for Aboriginal children in care were lower than those of non-Aboriginal children. For all age groups combined, the overall death rate was about the same for Aboriginal and non-Aboriginal children in care. This differs from the total population, where Status Indian death rates have traditionally been two to three times the provincial rates, in all age groups (Provincial Health Officer, May 2001).

### Violence and abuse

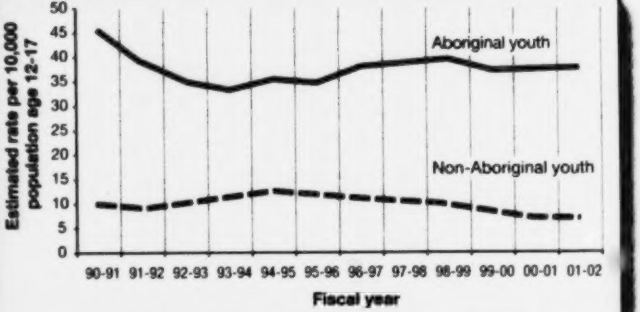
Research indicates that most Aboriginal people will have first-hand experience with violence or abuse at some point in their lives. One First Nations study on family violence found that Aboriginal women and children under age 15 suffer high rates of violence and abuse, with 1 in 3 Aboriginal women reported being abused by their partners, compared to about 1 in 8 for Canadian women. The same study reported that 86 per cent of respondents had experienced or witnessed family violence (B.C. Social Program Secretariat, 1995).

### Crime

British Columbia does not keep crime statistics based on the Aboriginal status of offenders or victims. When Saskatchewan examined this issue a few years ago, it was found that Aboriginal people were more likely to be victims of violent crime and to be involved in the criminal justice system. On average, Aboriginal accused were younger than non-Aboriginal, and there was a difference in the male-female ratio. About one-quarter (26 per cent) of Aboriginal accused were women, compared to 16 per cent of non-Aboriginal accused in the urban centres studied (Quann & Trevethan, 2000).

**Fig. 4.16**

Youth in Justice Institutions — Average Daily Count, Aboriginal and Non-Aboriginal Youth, B.C. 1990-91 — 2001-02



The number of youth in justice institutions, as an estimated rate per 10,000 youth age 12-17. Aboriginal youth population estimated at 7 per cent of the total B.C. population age 12-17 in 1996, according to the Census question on ethnic origin (single or multiple origins).

Sources: (1) Data Services, B.C. Ministry of Children and Family Development. Unpublished tables, June 2002. (2) Statistics Canada, 1996 Census. BC STATS population estimates and projections.

In B.C., as in other Canadian provinces and territories, Aboriginal people are over-represented in the prison system relative to their population. About 20 per cent of those admitted to adult correctional institutions in B.C. are Aboriginal (Statistics Canada, 2000) – almost 7 times their proportion of the adult population (only about 3 per cent of the provincial adult population are Aboriginal).

In 2001-02, 29 per cent of admissions to youth justice institutions and 24 per cent of community admissions (probation, bail supervision) were Aboriginal youth (B.C. Ministry of Children and Family Development, June 26, 2002). On a typical day, 84 Aboriginal and 205 non-Aboriginal youth were in custody. As a rate per 10,000 youth, Aboriginal youth have rates of institutionalization that are 3-5 times as high as non-Aboriginal youth (Figure 4.16).

## Improving Health

Community environments play a major role in physical, mental, emotional, and spiritual health. Aboriginal communities recognize this. In numerous surveys and studies, Aboriginal people express a high level of concern about the impacts of poverty and other social conditions on their health.

Although data are certainly not perfect or complete, this chapter has shown significant differences in social and economic conditions between Aboriginal people and other residents of B.C. Some of these differences are due to community size and location. Aboriginal communities are located in northern and rural areas of the province, which tend to have poorer results on measures such as income, employment, and educational attainment. However, the magnitude of the differences between Aboriginal people and other British Columbians is not explained solely by differences in location and population structure.

### Harvard Project Research Results

In the United States, as in Canada, most indigenous peoples are poor, with problems such as high unemployment, poor health, sub-standard housing, and a host of other negative indicators. Yet, many American Indian communities have been breaking out of this cycle. Since 1986, Harvard University has been involved in a major, research-based effort to understand the dynamics of self-governance and economic development on American Indian reservations (Cornell, 2001).

By studying "what works," researchers identified the make or break keys to economic development (Cornell & Kalt, 2000). Successful communities had genuine decision-making pcwer – not just administrative control over decisions made elsewhere. They also had the ability to sustain collective action.

In a presentation to the B.C. Treaty Commission Forum, Harvard Project co-founder Stephen Cornell (2001) summarized what matters for Native nations seeking development success:

- Jurisdiction matters – exercising control over the development agenda and resources; coupling decisions and their consequences;
- Institutions matter – sending a message to investors that their investments will not be hostage to politics or corruption;
- Culture matters – matching formal institutions to indigenous conceptions of how authority should be organized and exercised, and matching political boundaries to collective identities;
- Strategic thinking matters -- searching not for quick fixes but for ways of building societies that work, over the long run.

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To eliminate inequalities in health, we must start by eliminating inequalities in social and economic circumstances. The movement to self-governance, including control over local services, is one way in which inequalities are being tackled. The movement to self-determination may take many years to achieve. Meanwhile, social programs will be needed to meet the continuing needs of Aboriginal communities.

Ultimately, most community problems must be solved by Aboriginal people themselves, but governments – and society as a whole – can do a great deal to provide opportunities and climates in which Aboriginal businesses, cultural, and political organizations can help their own communities (Williams, 2001). Individuals can play a part, too, by actively opposing racism and discrimination. Tackling large-scale, structural discrimination is even more challenging.

## What Targets are Achievable?

With regard to employment and income levels for Aboriginal communities, the Provincial Health Officer is not aware of any specific targets that have been set for British Columbia. Ideally, Aboriginal people should enjoy a standard of living that is equal to that of other British Columbians, and progress toward this end should be measured. To achieve equity in employment rates could require growth rates in Aboriginal employment of triple those for the general population, according to national estimates (Mendelson & Battle, 1999). On the bright side, while Aboriginal unemployment rates seem high, the actual number of Aboriginal people unemployed was about 15,000 in the 1996 Census. A focused effort could make a real difference in these numbers.

The Ministries of Education and Advanced Education have a number of goals and priorities for increasing the academic success of Aboriginal students and for involving Aboriginal communities in decisions about schools and the programs they provide (see Chapter 5). The decision to establish a band school is made locally. For a variety of reasons, First Nations communities may not choose this path, and there is no specific target for the proportion of children who attend band versus public schools.

The long-term goal of the First Nations and Inuit Health Branch is to withdraw completely from direct delivery of health services on reserve, reserving only funding, accountability, and some supervisory functions for itself. With child welfare services, too, the principle is that First Nations agencies should deliver these services. The long-term goal is complete delegation, although some bands may be considered too small to manage and deliver their own services.

There is a target to reduce the provincial rate of children in care to the national average (9 per 1,000) by the year 2004-05 (B.C. Ministry of Children and Family Development, 2002). Aboriginal children comprise over 40 per cent of B.C.'s children in care, and everyone agrees that this number is too high. At this time, no specific targets have been set for reducing the number or proportion of children in care who are Aboriginal. Rather, the focus is on increasing the capacity of Aboriginal communities to deliver child and family services. Ideally, if communities are stronger, then families will be stronger, and so there will be fewer children in care. Twenty Aboriginal child protection agencies have been created, and the creation of regional Aboriginal authorities for child and family development is being explored. As more Aboriginal agencies assume responsibility for children in care, the number, in care may go up, at least in the short term.

## What Actions Can We Take?

Individuals and families can:

- Actively oppose racism.
- Find out more about self-governance and other self-determination issues.

Aboriginal communities and organizations can:

- Work together to overcome disadvantages of small community size, for example, by forming institutional cooperatives to achieve economies of scale.

Employers can:

- Examine hiring practices to ensure equality of opportunity.

Governments and communities can:

- Set clear, measurable goals for employment, income, and education levels of Aboriginal people equal to those within the general population, along with methods for public reporting of results.
- Support efforts by Aboriginal people to achieve self-determination and a collective sense of control over their futures, in both on- and off-reserve communities. In the interim, provide income support and social programs that meet the needs of Aboriginal communities.
- Invest in adult education opportunities, skills upgrading, training, job preparation, financial assistance for work and work clothing, child care, and stable affordable housing.
- Ensure that effective programs are in place to support those who have suffered abuse.
- Encourage participatory research to gain a more clear understanding of the relationship between socio-economic conditions and the health of Aboriginal communities.

# 5. Opportunities for Healthy Growth and Development

*This chapter is about the opportunities Aboriginal peoples have for healthy growth and development. Topics include prenatal and infant health, youth health, learning opportunities, and the use of tobacco and alcohol – behaviours that have a major impact on the health of Aboriginal peoples.*

## Highlights

- Teen pregnancy rates are declining faster for Status Indian women than for other B.C. women, although Status Indian women still have more children and have them earlier in life.
- SIDS rates showed a steep decline during the 1990s, especially among Status Indian babies. As a result, Status Indian infant mortality rates have nearly reached the low rate experienced by the general population. This represents a major achievement.
- On standard measures of academic performance, Aboriginal students do more poorly than other students, and they have more learning and behavioural problems. The gap between Aboriginal and other students is gradually narrowing, and examples set by successful programs are pointing to "what works" in helping Aboriginal students learn and stay in school.
- Tobacco and alcohol take a huge toll on the lives and health of the Aboriginal population. Like other high-risk behaviours, tobacco and alcohol misuse reflect social and cultural stresses, which impact people's ability to cope with life in healthy ways.

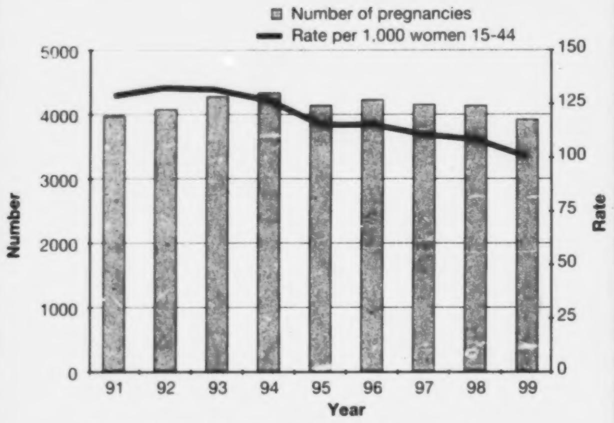
## Pregnancy Patterns

Pregnancy rates have a major impact on the demographic characteristics of the Aboriginal population. Examining pregnancy trends and patterns can assist in tracking the level of reproductive health, as well as assessing needs for services that contribute to reproductive and child health.

About 4,000 Status Indian women become pregnant in B.C. each year, based on data from birth registrations, hospitals, and clinics. In the past decade, the annual number of pregnancies has remained about the same, while the population of women in their childbearing years increased 27 per cent. As a rate per 1,000 women, pregnancies declined from 129 in 1991 to 100 in 1999 (Figure 5.1).

Fig. 5.1

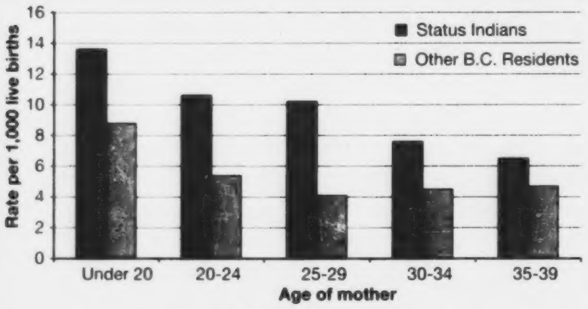
Pregnancies, Status Indian Women in B.C., 1991 - 1999



Estimated number of pregnancies, based on the number of pregnancies resulting in a live birth, stillbirth, induced abortion, or hospitalization due to miscarriage.
Source: Status Indian Pregnancy Counts and Rates by Age Groups by Health Region, British Columbia 1991 to 1999. B.C. Vital Statistics Agency, July 2001.

Fig. 5.2

Infant Mortality by Age of Mother, Status Indians and Other Residents of B.C., 1991 - 1999



Source: Regional Analysis of Health Statistics for Status Indians in British Columbia 1991-1999. B.C. Vital Statistics Agency, July 2001.

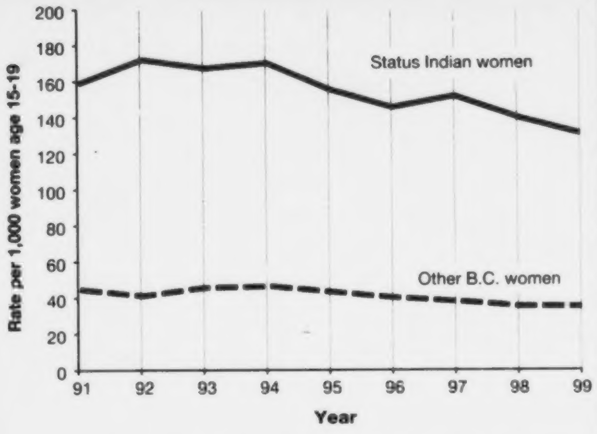
Of every ten Status Indian pregnancies in 1999, seven resulted in a live birth, two ended in abortion, and one resulted in a miscarriage requiring hospitalization or a stillbirth. Over the nine-year period 1991 to 1999, the live birth rate declined, while the rates for abortion and miscarriage/stillbirth remained fairly constant.

On average, Aboriginal women have more children and have them earlier in life than other B.C. women. From a biological perspective, the ideal time for a woman to have children is in her 20s. Teen pregnancy – especially before age 18 – is a health and social concern in the general population, because mothers in their early teens face higher risks during pregnancy, and early childbearing often begins a cycle of poverty and dependence. Babies born to teen mothers are more likely to die in the first year of life, in both Status Indian and the general B.C. population (Figure 5.2).

In Aboriginal society, conception is an occasion for celebration of life (B.C. Task Force on Access to Contraception, 1994). The impact of teen pregnancy requires more discussion with Aboriginal communities. In any case, a post-secondary education system geared

**Fig. 5.3**

Teen Pregnancy Rates, B.C. 1991 - 1999



Estimated number of pregnancies, based on the number of pregnancies resulting in a live birth, stillbirth, induced abortion, or hospitalization due to miscarriage.
Source: Status Indian Pregnancy Counts and Rates by Age Groups by Health Region, British Columbia 1991 to 1999. B.C. Vital Statistics Agency, July 2001.

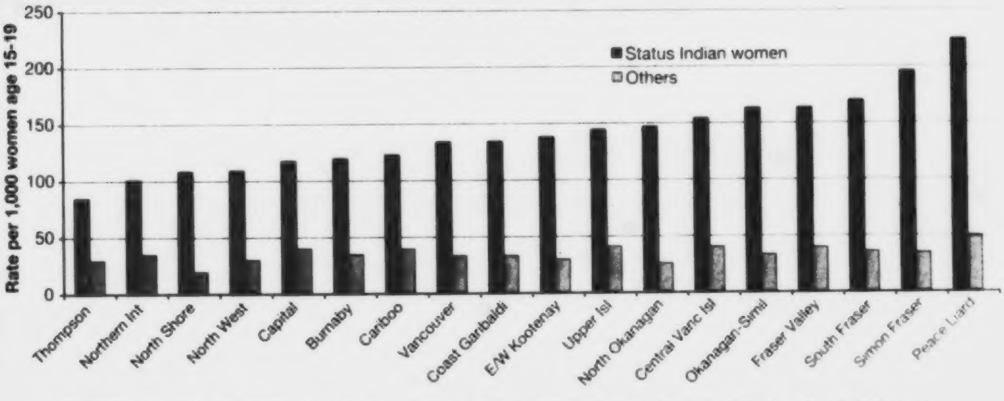
to people without children may not meet the needs of young parents. The education system could be adjusted so that it is ready for parents who wish to return to school in their 20s or beyond.

Teen pregnancy rates have been declining, especially among younger teens (ages 13 to 17), and the decline has been steeper for Status Indian women (Figure 5.3). Across the province, pregnancy rates for Status Indian teens in 1999 ranged from a low of 85 in the Thompson region to a high of 224 per 1,000 in Peace Liard (Figure 5.4).

Abortion rates are often used as an indirect indicator of unintended pregnancies. A high rate of unintended pregnancies may indicate problems with sexual health education or lack of access to confidential and affordable contraception services. Status Indian women have abortion rates that are somewhat higher than other B.C. women, especially in the younger age groups (Figure 5.5). Contraceptive services are an essential element of reproductive care, but services must be designed in consultation with Aboriginal communities, taking into account their needs, preferences, and values.

**Fig. 5.4**

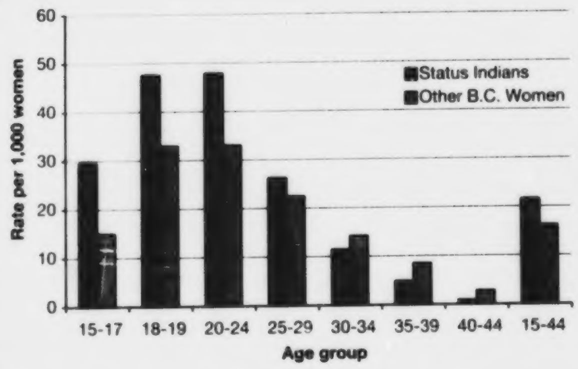
Regional Differences in Teen Pregnancy Rates, B.C. 1999



Estimated number of pregnancies, based on the number of pregnancies resulting in a live birth, stillbirth, induced abortion, or hospitalization due to miscarriage.
Source: Status Indian Pregnancy Counts and Rates by Age Groups by Health Region, British Columbia 1991 to 1999. B.C. Vital Statistics Agency, July 2001.
Note: Richmond region not shown due to small number of Status Indians pregnancies.

Fig. 5.5

Abortion Rates, Status Indians and Other B.C. Women, 1991 - 1999



Induced abortions performed in hospitals or clinics.
Source: Status Indian Pregnancy Counts and Rates by Age Groups and Health Region, British Columbia 1991-1999. B.C. Vital Statistics Agency, July 2001.

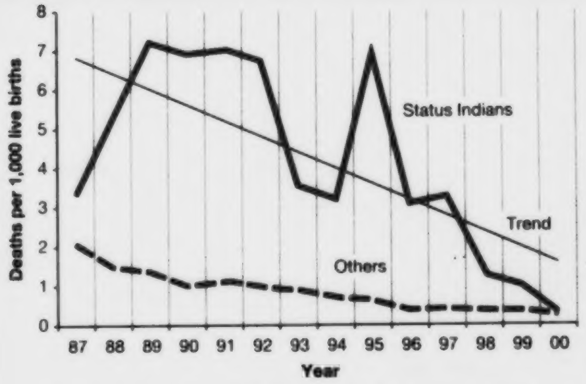
## Infant Health

For Status Indian babies, mortality in the first 28 days of life (the neonatal period) has reached the low rate experienced by the provincial population. For the 3-year period 1998 to 2000, the neonatal death rate was 1.8 per 1,000 live births for Status Indians, which was actually lower (better than) the 2.7 rate for other British Columbians.

In the past, Status Indian babies have had higher rates of post neonatal deaths, those that occur between one month and one year of age. SIDS (Sudden Infant Death Syndrome) was the major cause of deaths to Status Indians during the post neonatal period. SIDS rates declined steeply during the 1990s, especially for Status Indian babies (Figure 5.6). Not smoking around babies, having babies sleep on their back, and breastfeeding are ways to reduce the risk of SIDS. Pneumonia has been another cause of excess mortality among Status Indian infants. Pneumonia and other respiratory infections are becoming less frequent, but avoiding exposure to second-hand smoke, pneumococcal vaccine, and educating parents and caregivers about how to care for sick children remain key preventive activities.

Fig. 5.6

Infant Deaths due to SIDS, Status Indians and Other Residents of B.C., 1987 - 2000



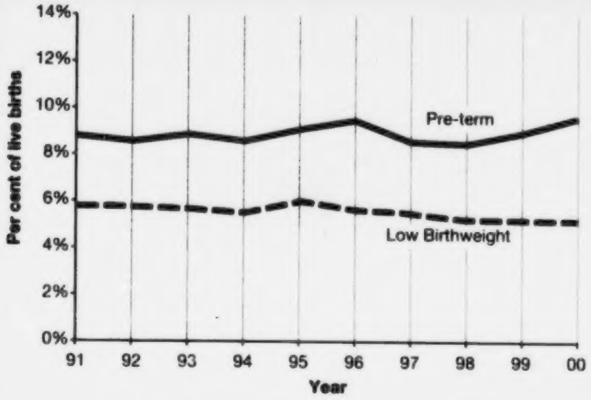
Source: B.C. Vital Statistics Agency. Unpublished tables, June 2002.
Note: SIDS deaths may be undercounted during the last year or two due to pending deaths awaiting final coroners' reports.

Birthweight provides information about an infant's health and chance of survival. North American native populations have a higher average birthweight than non-natives. The exact causes and the health implications of this difference in average birthweights are not known. A genetic predisposition to heavier babies, higher rates of glucose intolerance during pregnancy, and nutritional differences are some of explanations that have been proposed (Canadian Institute of Child Health, 2000; Health Canada, 2000).

More than 5 per cent of Status Indian babies are "low birthweight" (less than 2,500 grams), and about 9 per cent are pre-term (born too early, before the 37th week of pregnancy). Low birthweight has decreased slightly, while pre-term births have increased slightly, during the past decade (Figure 5.7). Compared to other B.C. babies, Status Indians have a slightly higher rate of low

Fig. 5.7

Low Birthweight and Pre-Term Births: Status Indians, B.C. 1991-2000



Source: B.C. Vital Statistics Agency. Unpublished tables, June 2002.

birthweight, but a pre-term rate that is about 1.5 times greater. Vancouver has the highest low birthweight rate and the greatest difference between Status Indians and other residents of the region (see data in Appendix D).

Smoking by the mother during pregnancy, lack of nourishment in the mother's womb, pregnancy-induced hypertension, and multiple births are some of the known causes of low birthweight. The cause of most pre-term births is unknown, and this is an area that requires more study. However, the probability of having a healthy, full-term baby increases if women have access to good prenatal information and care.

## Sheway Reaches Out to Pregnant Women in Vancouver's Downtown Eastside

In 1993, a group of health and social service agencies came together to create a unique outreach program in Downtown Eastside Vancouver, one of the poorest neighbourhoods in Canada. The program reaches out to pregnant women and helps them meet their needs for safe living conditions, economic security, and physical and social well-being. The program also provides practical supports such as hot lunches, food coupons, food bags, formula, diapers, bus tickets, and clothing.

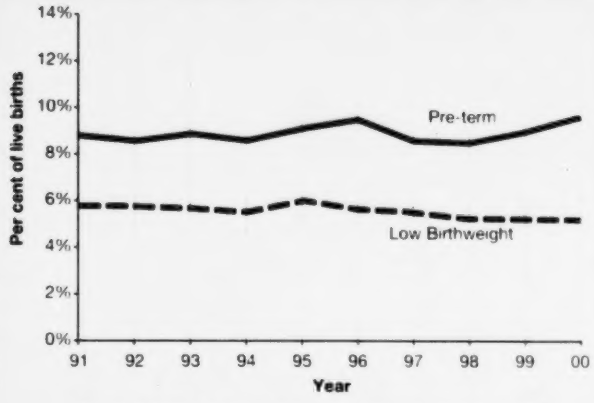
A recent evaluation found that Sheway has achieved a high level of success in many aspects of women's lives: access to prenatal care, nutritional status, choices with regard to alcohol and other drugs, action on sexually transmitted diseases, access to housing, connection to social support, and development of parenting skills.

Before Sheway was established, a review of health department records found that 40 per cent of babies born in this neighbourhood were exposed to alcohol or other drugs in utero (Loock et al., 1993). Of the babies exposed to these substances, one-third had a low birthweight, and all were apprehended by child welfare authorities. In 1998, one-quarter of Sheway clients were able to make improvements with regard to their substance use. 42 per cent of babies born to Sheway mothers were apprehended, but more than one-third of these children (37 per cent) were later able to return to their birth mother or immediate family members. The low birthweight rate (14 per cent) was higher than that for the province overall, but these are still good results, as most Sheway clients are low-income women with unstable housing, substance misuse problems, and other factors that put them at risk of low birthweight and other poor pregnancy outcomes.

Sheway was formed through a partnership of government and non-government agencies, including B.C. Children's Hospital, Vancouver Health Department, Vancouver Native Health Society, the YWCA, and the provincial government. About 60 per cent of Sheway clients are of Aboriginal descent, and the 2000 evaluation provided some suggestions for expanding the Aboriginal programming.

The *Evaluation Report of the Sheway Project for High-Risk and Parenting Women* can be found on the British Columbia Centre of Excellence for Women's Health Website at: http://www.bccewh.bc.ca/pub.htm

**Fig. 5.7** Low Birthweight and Pre-Term Births, Status Indians, B.C., 1991 - 2000



Source: B.C. Vital Statistics Agency. Unpublished tables. June 2002

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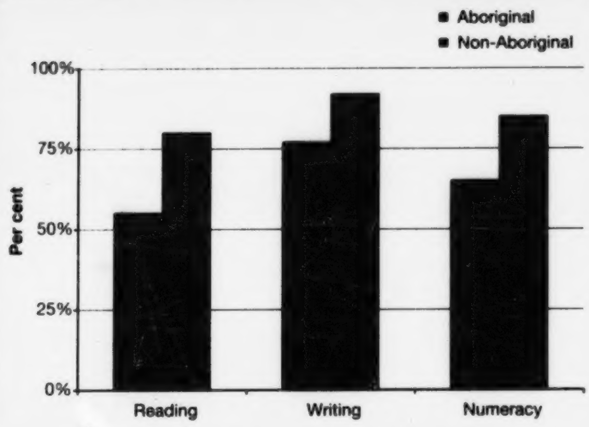
Fig. 5.8

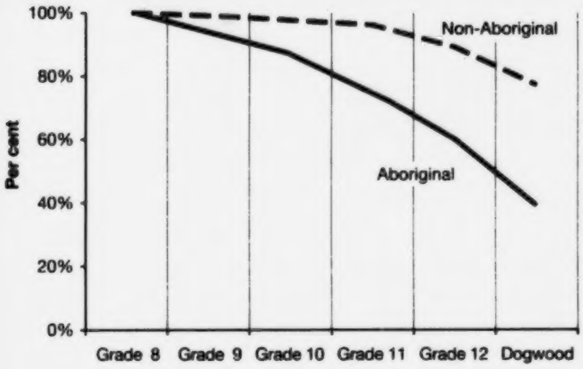
Grade 4 Students Meeting Expectations for the 2000/01 Foundation Skills Assessment



Source: B.C. Ministry of Education. 2001/2002 Annual Report

Fig. 5.9

Retention Rates for Students Starting Grade 8 in 1994, B.C.



Source: B.C. Ministry of Education. How are we Doing? An Overview of Aboriginal Education Results for Province of BC 2001.
Note: The Dogwood Diploma is the B.C. Certificate of Graduation. It is commonly called the Dogwood Diploma because it has an imprint of a dogwood flower on the background of the certificate.

## Learning Opportunities

The formal school system has not always been successful in ensuring that Aboriginal students receive a quality education – one that allows them to obtain the qualifications and skills required to participate in the economy, while maintaining ties with their culture. Some issues Aboriginal students face in the school system include racism, teachers' lack of understanding of aboriginal culture and student assessment techniques.

On most outcome measures, Aboriginal students do more poorly than other students, and they have more learning and behavioural problems. These differences begin at an early age, as shown by test scores of Grade 4 students (Figure 5.8).

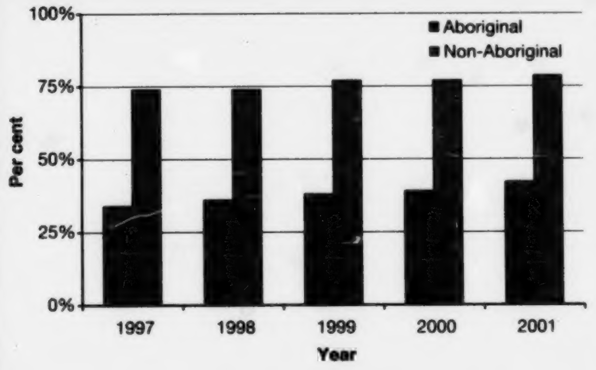
Aboriginal secondary school students are less likely to progress from year to year and less likely to graduate.

Of Aboriginal students entering grade 8 in 1994, only 42 per cent graduated with a Dogwood Diploma within six years, compared to 79 per cent of non-Aboriginal students.

There are other differences in the classroom. Aboriginal students are over-represented in special education programs. The difference is greatest in the "severe behaviour disorders" category, with Aboriginal students having a rate 3.5 times greater than the general kindergarten to grade 12 population. Poverty, family dysfunction, exposure to drug and alcohol use, and a higher prevalence of fetal alcohol syndrome are some of the reasons that have been suggested for this higher rate (McBride & McKee, 2001).

**Fig. 5.10**

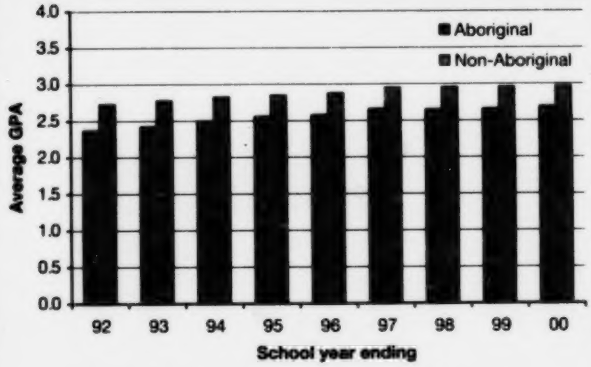
School Completion Rates for Grade 8 Students, 1997 - 2001



Proportion of students who graduate with a Dogwood Diploma within 6 years of starting Grade 8.
Sources: (1) B.C. Ministry of Education. How are we Doing? An Overview of Aboriginal Education Results for the Province of BC 2001
(2) 2001/02 Annual Report, A New Era Update

**Fig. 5.11**

Grade Point Average of High School Graduates 1992 - 2000



Average GPA of students receiving Dogwood Certificates.
Source: B.C. Ministry of Education. How are we Doing? An Overview of Aboriginal Education Results for Province of BC 2001.

Comparing test scores and other results of Aboriginal and non-Aboriginal students may not always be appropriate because these assessment methods may be culturally biased. However, there are some bright spots. Firstly, school completion rates and grade point averages for Aboriginal students graduating from Grade 12 are rising, and the gap between Aboriginal and other students is gradually narrowing (Figures 5.10 and 5.11). Secondly, work on best practices is pointing the way to continued improvements in the future.

By studying schools and districts that have the best academic outcomes for Aboriginal students, the Ministry of Education has been able to identify a set of criteria for success. A focus on academic learning, a research base, clear goals and objectives, cultural relevancy, and strong family and community involvement are some of the attributes of effective programs (http://www.bced.gov.bc.ca/abed/effprog/intro.htm). School districts that adhere to these educational "best practices" also have the lowest rates of behavioural problems (McBride & McKee, 2001).

Enhancement agreements between Aboriginal councils and school districts are another promising practice. Each agreement includes a set of goals for performance, with annual targets proceeding toward improving the academic success of Aboriginal learners. Links to traditional culture and language are emphasized. So far, enhancement agreements have been signed for Kamloops, Campbell River, Maple Ridge, Cowichan Valley, Nanaimo and Comox Valley, and the Ministry of Education is encouraging aboriginal and educational communities in other districts to develop similar agreements (http://www.bced.gov.bc.ca/abed/agreements/).

### Langley School District Aboriginal Program

In September 1993, Langley School District developed an Aboriginal Program for its schools in partnership with the local Aboriginal community. An advisory committee was established, with representatives from the Kwantlen, Katzie, Matsqui and Sto:lo Nations, the Métis community, and the off-reserve community, along with a school trustee and Aboriginal Program personnel.

At the elementary level, seven Aboriginal Support Workers visit 35 schools on a scheduled basis and consult with Aboriginal students individually according to need. At the secondary level, the Aboriginal Education teacher and two Aboriginal Support Workers provide support services for individual students and organize monthly group meetings for all Aboriginal students. In addition to the support services provided to Aboriginal students, the program also provides classroom cultural presentations, field trips, and curriculum development for all students. Fourteen Aboriginal Cultural Presenters are available to provide classroom presentations which are tied to the prescribed learning outcomes of the regular school curriculum.

The 1997/98 Provincial Learning Assessment showed some encouraging results. In the Langley School District there was no significant difference between the test scores of Aboriginal students and non-Aboriginal students. Graduation rates of Aboriginal students have also been on a steady rise over the last six years.

The number of students now identified by their families as being Aboriginal has grown to over 1000, more than triple the number of the first identification. This may be the result of increasing self-esteem, as more students are proud to announce their ancestry. It may also be an indication of improving retention rates. Aboriginal students are increasingly focused on academic goals, their parents are more apparent at school functions, and teachers are making genuine efforts to include Aboriginal content into their teaching.

Subjective and statistical data indicate that the program is having a positive impact on Aboriginal students. When staff are asked for reasons, they suggest that it is not so much the specific programming, but the attitudes and relationships that are making a difference. One of the great strengths of the Aboriginal Program is the involvement and commitment of the local Aboriginal communities. Chiefs and representatives from the Kwantlen, Katzie and Matsqui First Nations, as well as the Métis community, strongly support the Aboriginal Program activities and functions.

For more information about the Langley initiative and other effective programs for Aboriginal Education, visit the Ministry of Education's web site at http://www.bced.gov.bc.ca/abed/effprog/.

When it comes to post-secondary education, there has been a large gap in participation rates for Aboriginal people compared to non-Aboriginal people. Based on 1991 Census data, non-Aboriginal people were three times more likely to attend university and seven times more likely to graduate. In 1997-98, Aboriginal students represented only 1.5 per cent of the total student body in B.C. colleges, university colleges, and institutes (B.C. Ministry of Advanced Education, 1998). Since then, a number of initiatives have been taken to increase access to post-secondary education for Aboriginal learners.

The post-secondary system has focused on increasing the number of Aboriginal students and improving retention rates through counselling supports at public institutions. Most institutions now have Aboriginal representation on Boards of Governors and employ an Aboriginal education co-ordinator to provide support services to Aboriginal students. In addition, a small number of institutions have incorporated Aboriginal perspectives into selected regular courses and offer targeted courses and programs for Aboriginal people.

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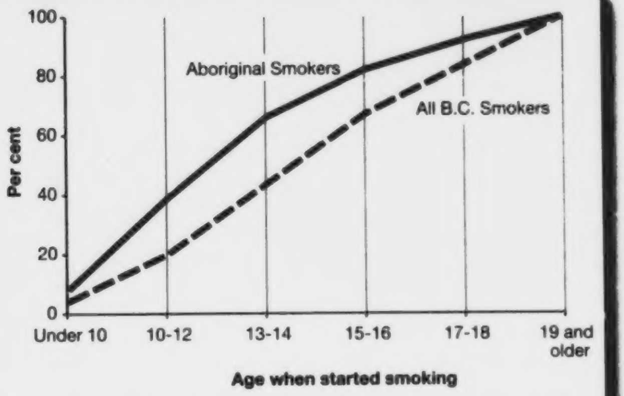
Fig. 5.12

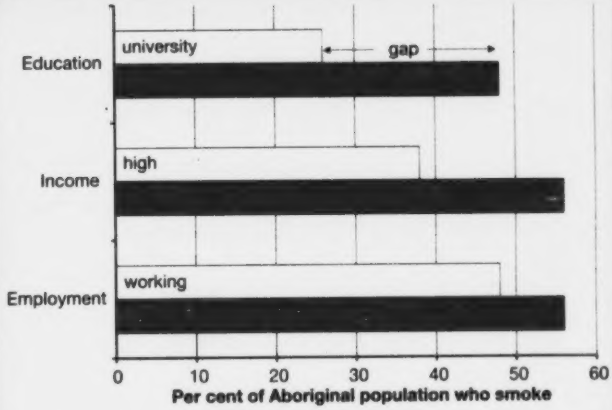
Age When Started Smoking, Current Smokers Age 12 and Older, B.C. 1997



Source: Tobacco Use in BC 1997. Heart and Stroke Foundation of B.C. and Yukon.

Fig. 5.13

Aboriginal Smoking Rates by Education, Income Adequacy, and Labour Force Status, B.C., 1997



Source: Tobacco Use in BC 1997. Heart and Stroke Foundation of B.C. and Yukon.
Note: "Working" includes working full or part-time.

More Aboriginal students are completing school, but they continue to face financial barriers, problems finding employment after school, discrimination while studying, and the challenge of trying to study and raise children at the same time (B.C. Ministry of Advanced Education, 1999).

## Health Behaviours

### Tobacco

In the Aboriginal community, tobacco misuse is defined as the non-traditional use of commercial tobacco. Smoking cigarettes is the most common form of tobacco misuse (B.C. Ministry of Health and Ministry Responsible for Seniors, 2001).

Smoking rates are high (45 per cent) among the Aboriginal population – about twice the rate in the general population (23 per cent). Aboriginal people begin smoking at a younger age: almost 40 per cent began smoking before the age of 13, compared to 20 per cent of all smokers in the population (Figure 5.12). These figures are based on a 1997 survey, Tobacco Use in BC. Due to differences in survey design, other surveys (Aboriginal Peoples Survey, First Nations and Inuit Regional Health Survey, Adolescent Health Survey) have slightly different results, but they all agree that Aboriginal smoking rates are about double the rates of their peers.

Like many other health behaviours, smoking is related to social and economic conditions and people's ability to cope with life in healthy ways. As in the non-Aboriginal population, smoking is much less common among Aboriginal people who are employed, who have higher incomes, and who have a university education (Figure 5.13). Tobacco use seems to be a marker for the stresses that disadvantaged groups experience.

Major efforts are under way to reduce the use of tobacco in B.C. Education programs, cessation services, and community awareness activities aimed at Aboriginal youth should assist Aboriginal communities to bring down their high rates of smoking.

### Communities Take the "Honour Your Health" Challenge

Aboriginal people today have significantly higher rates of tobacco use than the general population – up to two times non-Aboriginal smoking rates.

To help Aboriginal communities work toward reducing tobacco use, the Honour Your Health Challenge was initiated in February 2001. Participants were challenged to quit smoking, reduce the number of cigarettes they smoke, or make their homes smoke-free for one month.

Seabird Island Band was one of 25 groups that participated in the 2001 Challenge. Seabird Island Band members participated in information sessions about the health effects of tobacco. Speakers were brought in to discuss traditional uses of medicines and how to be "well." The group sessions provided opportunities to determine what was out of balance in their lives.

Of the over 300 people who participated in the 2001 Challenge, 50 per cent remained smoke-free. An expanded 2002 Challenge ran for the month of February 2002. Perhaps the most significant indicator of success is that over 100 organizations applied to be sponsors and participate in this year's challenge. Of those, approximately 65 groups, and between 700 and 1,000 people, participated.

The Seabird Island Band project, and many others that used similar approaches, were successful because participants were exposed to information on quitting, there was no judgment, they could change at their own pace, and quitting aids were made available. At the conclusion of many projects, communities honoured the participants at a cultural event to highlight their achievements.

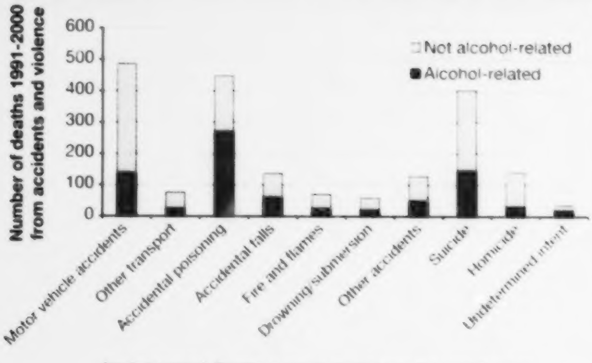
Aboriginal organizations around the province act as sponsors for the Challenge. Sponsors recruit smokers and provide them with support to complete the Challenge. The B.C. Ministry of Health Planning provides funding, training, and resource materials.

## Alcohol

Aboriginal adults in B.C. drink alcohol less often than adults in the general population of Canada, according to 1990 and 1991 population surveys (Martin & Jin, 2002). However, there are a number of signs that alcohol is being consumed at inappropriate levels (Table 5.1). Heavy drinking is common among B.C. youth, with half of Aboriginal students who drink reporting they have engaged in binge drinking, and many drink and drive (The McCreary Centre Society, 2000). In terms of deaths, about 170 Status Indian deaths each year (178 in 2000) are classified as alcohol-related. This includes deaths where alcohol was the underlying cause of death, such as liver disease or alcoholic psychoses, as well as diseases or injuries where alcohol was specified on the death certificate as a contributing cause. Alcohol is a contributing factor in almost four of every 10 accidental and violent deaths (Figure 5.14). Since the last decade (Figure 5.15), deaths related

**Fig. 5.14**

**Deaths from Alcohol-Related Accidents and Violence, Status Indians, B.C., 1991 - 2000**



Alcohol-related: Deaths in which alcohol was the underlying or contributing cause of death, as noted on the Medical Certification of Death. Between 1991 and 2000, 38 per cent of Status Indian deaths were classified as alcohol-related, compared to 16 per cent for other residents of B.C.

Source: B.C. Vital Statistics Agency. Unpublished tables. June 2002.

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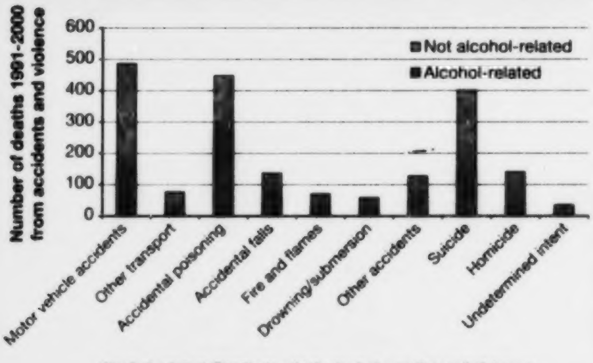

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### Table 5.1 — Indicators of Problem Drinking

| | Aboriginal Status Indian | Others | Ratio Aboriginal/Others |
|---|---|---|---|
| Binge drinking in past month, grade 7-12 students, 1998[1] (of those students who have used alcohol) | 51% | 43% | 1.2 |
| Driving after alcohol use in past month, grade 7-12 students[1] (of licensed drivers) | 25% | 16% | 1.6 |
| Alcohol-related hospitalizations, 2000/2001[2] (cases per 10,000, age-standardized) | | | |
| Alcoholic psychoses | 20.2 | 2.2 | 9.2 |
| Alcoholic dependence syndrome | 19.5 | 2.4 | 8.1 |
| Chronic liver disease/cirrhosis | 9.8 | 2.8 | 3.5 |
| Alcohol-related deaths, 1991-2000[3] | | | |
| Average number of alcohol-related deaths per year | 172 | 1,301 | |
| Rate per 10,000 population | 20.4 | 3.2 | 6.4 |
| Alcohol-related deaths as a per cent of all deaths | 24% | 5% | 4.6 |
| Progress in reducing alcohol and drug abuse, 1997[4] | | | |
| Per cent reporting "no progress" | 56% | - | |

Source: B.C. First Nations Regional Health Survey, 1997.

Notes:

[1] Binge drinking: Students who report consuming 5 or more drinks within a couple of hours in the past month. Source: Raven's children: Aboriginal Youth Health in BC. The McCreary Centre Society, 2000.

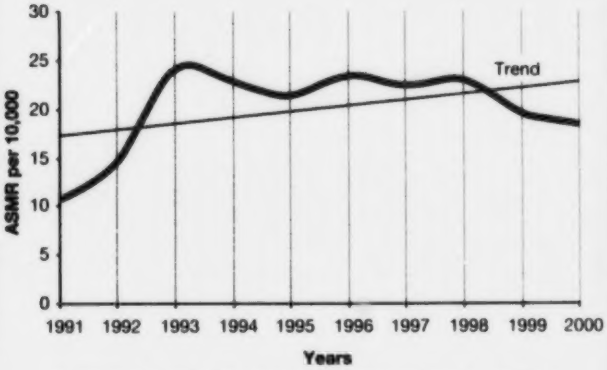
[2] Source: Morbidity Database. Prepared by Information Support, B.C. Ministry of Health Services. Project 2001-288.

[3] Deaths in which alcohol was the underlying or contributing cause of death, as noted on the Medical Certification of Death. Age standardized mortality rate per 10,000 standard population (Canada 1991 Census). Source: B.C. Vital Statistics Agency. Unpublished tables, June 2002.

[4] Per cent of First Nations on reserve reporting "no progress" in reducing alcohol and drug abuse in the last two years.

Fig. 5.15

Alcohol-Related Deaths, Status Indians, 1991-2000



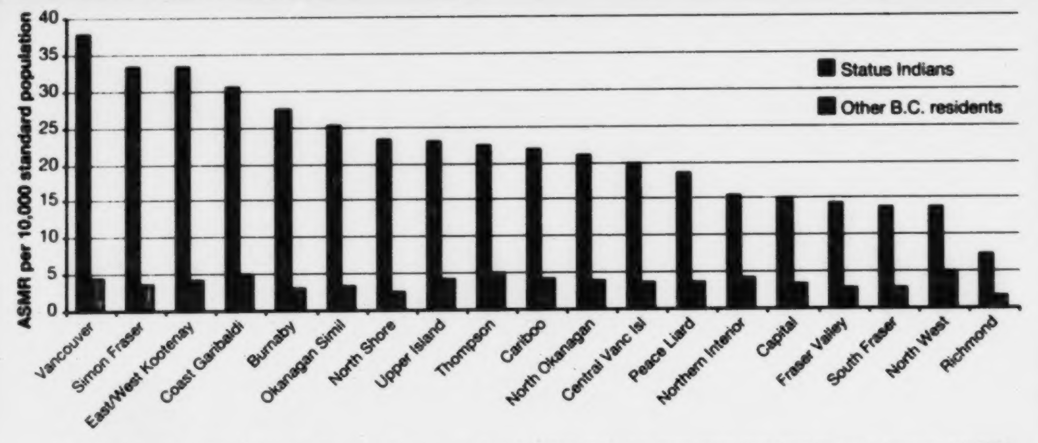
Source: B.C. Vital Statistics Agency. Unpublished tables, June 2002.

to alcohol for Status Indians, after standardizing for age are on the rise. At the regional level, Vancouver has the highest rate in alcohol-related deaths for Status Indians (Figure 5.16).

These statistics are supported by community knowledge, with alcohol abuse being identified as a significant community issue in most surveys and focus groups. Fifty-six per cent of respondents said that in the last two years, they had seen no progress in fighting alcohol and drug abuse, despite a significant number of resources being devoted to this problem area (B.C. Regional Health Survey Subcommittee, 2000).

Fig. 5.16

Alcohol Related Deaths, Status Indians and Other B.C. Residents, B.C. Health Regions 1991 – 1999



Source: Regional Analysis of Health Statistics for Status Indians in British Columbia 1991-1999. B.C. Vital Statistics Agency, July 2001.

Studies of some Aboriginal communities suggest a rate of Fetal Alcohol Syndrome (FAS) that may be 10 times higher than that in the general population. We don't know whether these rates are representative of all Aboriginal communities, because at present, there are no B.C. data on the frequency of FAS. The Health Status Registry and reporting sources are working to improve provincial information on this condition. Meanwhile, it is clear that FAS has had overwhelming impact on many Aboriginal communities, sometimes resulting in the entire community being directly affected by families struggling to cope with the effects of FAS (Children's Commission, 2001).

In a study of pregnant women on Vancouver Island, alcohol use was much higher among Aboriginal women – more than half (54 per cent) were at significant risk. It is important to note that women at risk for excessive drinking came from all social and economic groups. Among disadvantaged women (those with the lowest income and educational levels), Aboriginal women were at no greater risk than the rest of the population (Armstrong, Loock, & Robinson, 1994).

### Problem Gambling

Like alcohol, gambling can cause harm if it is not handled in a safe and responsible way. Problem gambling seems to be more common among Aboriginal people.

A recent review of the literature found problem gambling rates among Aboriginal adults in North America were 2 to 16 times that of the general population. The review team concluded that more research on this topic is needed, particularly qualitative research about the factors associated with problem gambling behaviour in the Aboriginal population (Wardman, D., el-Guebaly, & Hodgins, D., 2001).

### Community Approaches to Healing in Esketemc

Many Aboriginal communities have taken the lead in promoting traditional healing approaches. Perhaps the best known case is that of Esketemc (previously known as Alkali Lake), B.C., a community that was rife with alcoholism and alcohol-related problems such as violence, sexual abuse, and suicide. Esketemc turned itself around to become almost completely alcohol-free. This community stepped outside the patterns of addiction, and later abuse, and in doing so inspired other Aboriginal people to do the same.

In order to effect change, the Esketemc community first had to acknowledge their problem. Every man, woman and child on the Reserve was being seriously impacted by alcohol. A determined leadership first led the way out by sobering up themselves and maintaining their sobriety as an example for others to follow. This leadership acted as role models and support to other community members, and created an alcohol-free environment for others to participate in, as they chose to make changes in their lifestyle. With determined leadership by these individuals, strong leadership from the Chief in terms of social development policies, and informal leadership from many Esketemc people who encouraged and supported others in their sobriety, Esketemc moved closer and closer toward an alcohol free community.

For people to be able to move toward living a healthier, alcohol-free life, there had to be tangible opportunities and incentives available. Opportunities were needed and created for meaningful employment, for recreation, and for a social life that was alcohol-free. Most immediately, there had to be accessible and fairly continuous opportunities for healing, personal growth, and learning. A key element in the Esketemc transformation was a conscious placing of spirituality in the centre of the process. This involved a rediscovery of Native spiritual traditions and tools such as the sweat lodge, the sacred pipe, and other ceremonies. It also involved a conscious openness to and acceptance of religious diversity.

There was indeed a dramatic turnabout in alcohol consumption within the community, and over its 30 years of healing, Esketemc people continuously struggle with underlying issues associated with alcohol abuse. The path to wellness is a long one, but the community is still working together to overcome alcoholism and its attendant problems.

## Physical Activity

There are no specific statistics on physical activity among the Aboriginal population in B.C. However, the connection between physical activity and Aboriginal health and quality of life has been recognized both nationally and provincially.

The National Recreation Roundtable on Aboriginal/Indigenous Peoples, held in Maskwachees in February 2000, resulted in a declaration that "active living, physical activity, physical education, and recreation and sport are essential to promote health and address social issues facing Aboriginal peoples in communities across Canada."

The Aboriginal Sport Circle (a group of Aboriginal sport leaders with representation from most provinces and territories) has identified a number of barriers limiting the participation of Aboriginal youth in the sport system. These include racism, access to facilities and programs, and the cost of participation. While sport and physical activity are seen as an effective means of combating alcohol and drug abuse and other social problems, many Aboriginal communities have limited sport and recreation program opportunities (S. White, personal communication, March 15, 2002).

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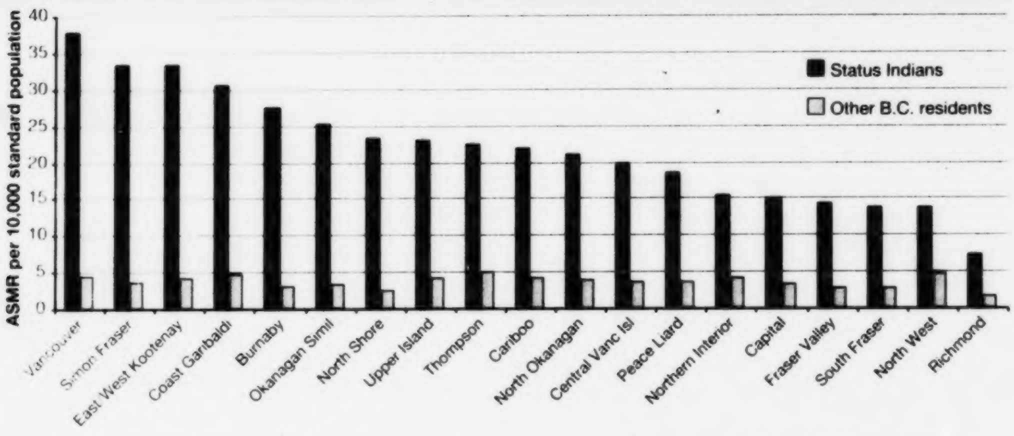

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In British Columbia, activities that support the objectives of the Maskwachees Declaration include:

- Development of a B.C. policy on sport and physical activity. This policy entrenches sport and physical activity as a right for all British Columbians and reinforces the province's commitment to physical activity and sport for all sectors, including Aboriginal communities. Within this policy, Aboriginal sport and physical activity has been identified as key objectives under the policy's two broad goals of "sport and physical activity for all" and "opportunity to achieve." The policy was developed through consultation, including representation from Aboriginal communities.
- Action plans for sport and physical activity. In the coming months, working groups, with Aboriginal representation, will be developing action plans for three settings: schools, communities, and organized sport.
- Programs to assist Aboriginal communities. A new program called the Aboriginal Youth FIRST Initiative will help Aboriginal communities develop capacity to provide sport and recreation programs. The provincial government's Sport and Physical Activity Branch also provides funding to the Aboriginal Sport and Recreation Association of B.C. to develop sport and recreation opportunities and to support Aboriginal athletes preparing for the North American Indigenous Games.

More information about these programs is available from the Sport and Physical Activity Branch, Ministry of Community, Aboriginal and Women's Services, http://www.sport.gov.bc.ca.

## Healthy Connections

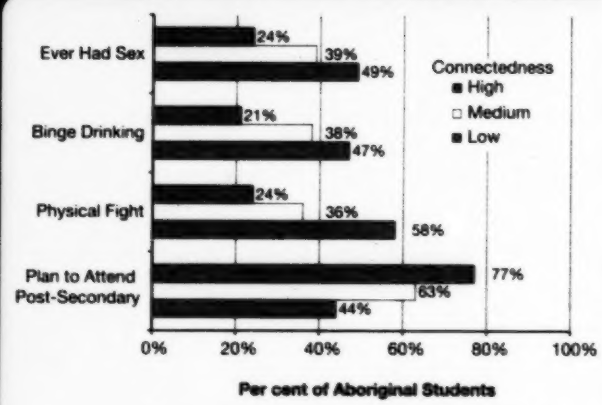
The recent Adolescent Health Survey found that most Aboriginal students have families, friends, or others in their lives who can help with personal problems. Aboriginal youth report feeling strongly connected to school and family at the same rate as non-Aboriginal students. Students who had a strong sense of belonging and involvement with school were more likely to plan to have higher educational expectations and less likely to engage in risky behaviours such as binge drinking and early and unprotected sexual intercourse (Figure 5.17).

It is important to note that this survey is based on the experiences of youth who are in school – not those who have dropped out or who are living on the streets.

In a 2002 street youth survey, over one-quarter (28 per cent) of street youth identified themselves as Aboriginal, compared with 6 per cent of the school-based Adolescent Health Survey of students in grades 7-12. None of the

Fig. 5.17

School Connectedness and Risk Behaviours, Aboriginal Youth in B.C. 1998



The proportion of students who report low, medium, and high levels of connectedness with their school. Scores are based on a series of survey questions that ask students to reflect on their satisfaction with relationships, including whether they feel involved in and fairly treated at school. Source: The McCreary Centre Society, 2000. Raven's Children: Aboriginal Youth Health in B.C.

B.C. street youth scored high on family connectedness, compared to 15 per cent of participating youth in school (The McCreary Centre Society, 2001).

## What Targets are Achievable?

Providing smoke-free environments will help in preventing SIDS as well as respiratory diseases in infants and young children. A long-term target to have all children brought up in smoke-free environments is recommended.

Setting targets for low birthweight is problematic, as the norms for birthweight are based on data for the non-Aboriginal population. However, improvements on birth outcome measures are possible, as some regions (North Okanagan) have achieved Status Indian rates as low as 3.5 per cent for low birthweight and 5.4 per cent for pre-term births, compared to regional lows (Peace Liard) of 3.8 per cent and 4.6 respectively, for other British Columbians.

The Ministry of Education has a goal to achieve parity of achievement for all K-12 students regardless of their ethnic origin, gender, geographic location, physical characteristics, or socio-economic status. A number of performance measures are used to gauge success: Foundation Skills Assessment scores, school completion rates, grade transition rates, grade point average in Grade 12 courses, per cent of students receiving scholarships, per cent making transitions to post-secondary and/or work, and per cent who show socially responsible behaviour such as community mindedness, valuing diversity, and a sense of self-worth (B.C. Ministry of Education, 2002; http://www.bced.gov.bc.ca/abed). Data are reported for equity groups, including Aboriginal students, although numerical targets have not been set.

The Ministry of Advanced Education has a strategic goal to increase the number of Aboriginal people entering and completing post-secondary education to a rate at least equivalent to that of the non-Aboriginal population (http://www.aved.gov.bc.ca/aboriginal/welcome.htm).

There is a provincial target to reduce smoking prevalence by one per cent per year over the year 2000 baseline (B.C. Ministry of Health Services, 2002), but no specific targets have been set for the Aboriginal population. The most recent data on Aboriginal smoking in B.C. are from the 1997 survey *Tobacco Use in BC.* At that time, 45 per cent of Aboriginal people smoked, compared with 23 per cent for the province overall.

## What Actions Can We Take?

The health system can:

- Work with Aboriginal communities to develop culturally appropriate reproductive care programs, including sexuality education, contraceptive services, and effective maternal care.
- Continue to monitor the birthweight distribution of Status Indians infants, to better understand the factors that affect it.
- Develop better methods for diagnosing and tracking the occurrence of fetal alcohol syndrome.
- Set regional and/or individual community goals for increasing the proportion of children who are brought up in smoke-free environments.

- Support Aboriginal communities to motivate community members to reduce tobacco use.
- Introduce a pneumococcal vaccine program for Aboriginal infants.

The school system can:

- Continue to find ways to help more Aboriginal youth finish high school and to attend post-secondary education.
- Provide practical assistance to Aboriginal learners, e.g., help with tuition and child care assistance, to allow people to stay in school and to return to school to upgrade their skills.

Government and community organizations can:

- Tackle the larger issues that affect children's health and development – poverty, food security, and social conditions.
- Implement community programs (such as the Four Pillars Approach in Vancouver) to prevent, treat, and reduce harms from substance abuse, with a focus on culture-based services specific to the Aboriginal population.
- Raise awareness and enforce drinking and driving legislation.

# 6. Physical Environment

*This chapter is about the physical environment. This includes the health issues of housing, indoor air quality, and drinking water, as well as the long-term issue of environmental change, which impacts Aboriginal lifestyle and culture.*

## Highlights

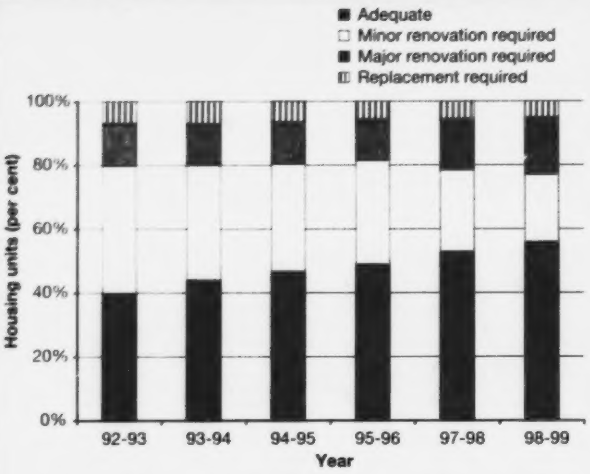
- The need for adequate, affordable housing may be the most pressing environmental health issue facing Aboriginal people in B.C. today.
- Housing quality on reserves is much better now than in the past. Still, almost half (44 per cent) of on-reserve housing units are in sub-standard condition, and three-quarters of Aboriginal lone-parent households in Vancouver are considered to be in "core housing need."
- Second-hand smoke is a major contributor to the higher rate of respiratory illness in the Aboriginal population. The health effects of second-hand smoke are compounded by the substandard housing conditions found in many Aboriginal communities.
- Some Indian reserves have inadequate drinking water systems, but there are also examples where water treatment on-reserve is better than in surrounding communities. By 2005, it is estimated that all First Nations on reserves will have filtration systems for their drinking water supplies.
- Environmental contaminants tend to accumulate in fish, marine mammals, and other "country foods." But by and large, Aboriginal people are better off eating their traditional foods, based on existing evidence about contaminants in B.C. foods.

## Housing

The lack of adequate, affordable housing continues to be a challenge for many Aboriginal communities. In fact, the need for safe, affordable, and well-maintained housing may be the most important environmental health issue facing the Aboriginal population today.

**Fig. 6.1**

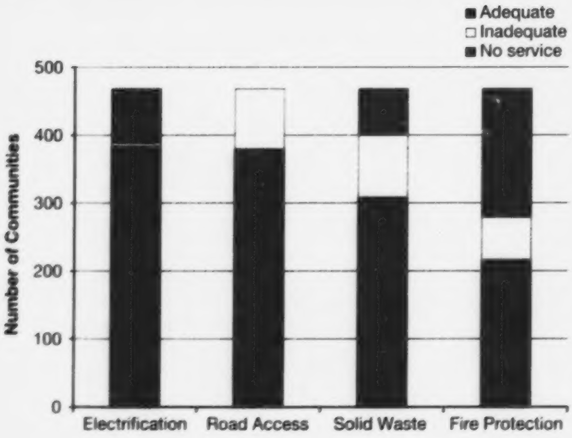
Progress in Housing Conditions, On-Reserve Communities in B.C.



Source: Indian and Northern Affairs Canada. *Housing and Infrastructure Assets Summary Reports.*
Note: "Replacement required" refers to housing units which are no longer habitable as a result of fires or natural disasters, or have been declared unsafe or unfit for human habitation; "major renovation required" includes housing units which have extensive structural faults such as rotting or sagging foundations, faulty roof or chimney, unsafe steps/stairways, defective plumbing or electrical wiring, or interior structural problems such as falling plaster; "minor renovation required" are housing units that meet minimum National Building Code standards but require normal preventive maintenance or repairs.

**Fig. 6.2**

Community Services On-Reserve, B.C., 1998-99



Source: Indian and Northern Affairs Canada. 1999 Housing and Infrastructure Assets Summary Report, page 23.

In reserve communities, earnings are less, and remote locations mean that construction costs are higher. On-reserve housing programs have made a difference. More than two-thirds of First Nations feel that progress has been made in housing quality and water and sewage facility development (B.C. Regional Health Subcommittee, 2000), and the housing data support that conclusion.

In 1992-93, 40 per cent of housing units on reserves were considered "adequate." By 1998-99, 56 per cent of the 16,025 houses on reserve were in adequate condition (Figure 6.1). This is an improvement, but there is still a long way to go, as there are still a substantial number of housing units needing minor repairs, major repairs to structural faults, or replacement. Overcrowding may also be a concern, although figures on average square footage per person are not readily available. According to the 1996 Census, almost 9 per cent of reserve households have 6 or more persons, compared to 3.5 per cent of other B.C. households.

In terms of basic facilities, about two per cent (258) of on-reserve housing units lack indoor plumbing. Of the 468 on-reserve communities, 82 per cent had adequate electrification, two-thirds (66 per cent) had adequate solid waste service, and fewer than half (46 per cent) had adequate fire protection service (Figure 6.2) (Indian and Northern Affairs Canada, 1999).

Housing is not just an issue in reserve communities. Low income and inadequate housing need are typical in Aboriginal lone-parent households, especially those living in urban areas. Forty-four per cent of Aboriginal households in Vancouver – and three-quarters of Aboriginal lone-parent households in Vancouver – are considered to be in "core housing need," which means that housing does not meet one or more of the standards for adequacy (in good repair and with full bathroom facilities), suitability (uncrowded), or affordability (shelter costs consume less than 30 per cent of household income) (Canadian Housing Information Centre, 1997; 1999). As a general rule, households are considered to have problems if more than 30 per cent of gross household income is spent on housing costs. At that level of spending, it is likely that there won't be enough money for other necessities such as food, clothing, and transportation. Households will face difficult choices such as sacrificing food, working longer hours, or relying on food banks. These choices may lead to poor health.

There has been very little research on the issue of Aboriginal homelessness per se. However, a 1997 review found that urban Aboriginal families have characteristics that place them at risk for homelessness: low income, poor housing, racism and discrimination, substance abuse, family violence, and physical and mental health problems (Beavis, Klos, Carter, & Douchant, 1997).

To find out more about the housing patterns of urban Aboriginal people, a survey instrument has recently been pilot tested in Toronto and Winnipeg, and local Aboriginal organizations participated in the survey administration. The survey is intended to study living arrangements, episodes of homelessness, and reasons for moving (Canadian Mortgage and Housing Corporation, 2001). Here in British Columbia, street youth have been surveyed by the McCreary Centre Society. Not all street youth are homeless, but an unstable living situation is one of the defining characteristics of young people involved in street life. Aboriginal youth were over-represented in B.C.'s street youth – 28 per cent of those surveyed identified themselves as Aboriginal, compared to 6 per cent of those in the school-based Adolescent Health Survey (The McCreary Centre Society, 2001).

The Canadian Mortgage and Housing Corporation (CMHC) administers housing programs that are targeted to Aboriginal households, including special programs for on-reserve and urban native housing. Aboriginal peoples also have access to social housing in B.C., and housing societies can submit proposals under provincial programs. More housing will help, but it must be accompanied by community development that provides jobs, empowers people, and reduces discrimination (Beavis, Klos, Carter, & Douchant, 1997).

### The Skeetchestn Community Housing Project

Prior to 1994, the Skeetchestn First Nation had insufficient and substandard housing. Many homes housed two or three families, and some of the houses were very small. The housing situation was unacceptable to the residents of the community, and the shortage of housing prevented off-reserve members from moving back.

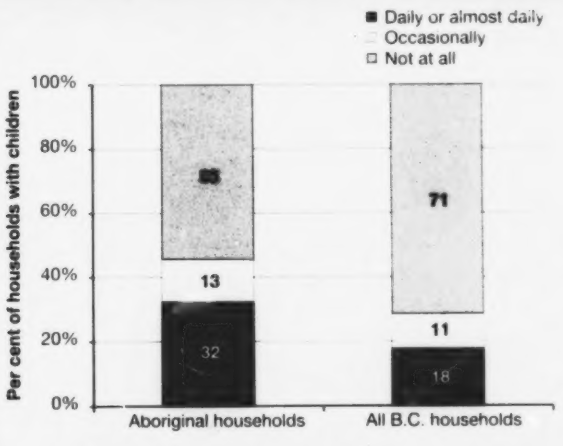
In response, the community developed a strong community development management plan and housing policy. Once these planning documents were complete, the First Nation went to Canada Mortgage and Housing Corporation with its first funding request in 1995. As a result of the community's excellent planning, Skeetchestn has now completed over 45 housing units, including both single and multi-family dwellings. Skeetchestn is stringent in sticking to the policies and financial bylaws set by the community, and the community has responded by abiding by the laws they themselves agreed upon. Skeetchestn has housed virtually every family on reserve who wants new housing. The First Nation now wants to focus on providing residences for single families and off-reserve members.

While new housing developments are the tangible results of this project, there are other, less obvious benefits. One is the number of jobs the construction project provided for Skeetchestn members. The First Nation believes in hiring locally, and employees are trained on the job to do different kinds of construction, including building log cabins, masonry, pouring concrete, carpentry, painting, and electrical work. The skills acquired open doors to jobs outside the community, and may lead to long-term careers in the construction industry. The housing units also bring members back to the community and lead to improved self-respect for Skeetchestn members.

The Skeetchestn First Nation has completed the seventh phase in its long-term housing development plan, which is intended to create about 100 new housing lots. They are currently waiting to receive approval to develop an additional subdivision. While waiting for approval for the subdivision, the First Nation is busy renovating existing houses and building a Pow Wow Arbor. The arbor seats over 1,200 spectators, and will be completed in 2003. A log cabin training program is also being run to increase the skills and knowledge base within the community.

Fig. 6.3

Exposure to Second-Hand Smoke, Households with Children Age 11 and Under, B.C. 1997



Source: Tobacco Use in BC 1997. Heart and Stroke Foundation of B.C. and Yukon.

## Air Quality

Indoor air pollutants can damage people's lung tissues, leading to infections and other types of illnesses. Young children, the elderly, and those with chronic illnesses are more vulnerable to hazardous agents in indoor air.

From a public health perspective, second-hand smoke is the most important indoor air pollutant in British Columbia today. Moulds, dust mites, and cockroaches are other indoor air concerns. For Aboriginal communities, indoor air quality is closely related to the issue of substandard housing.

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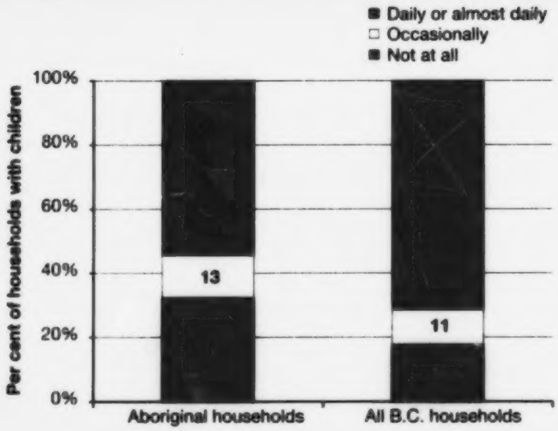
Fig. 63

Exposure to Second Hand Smoke, Households with Children Age 11 and Under, B.C., 1997



Source: Tobacco Use in BC 1997. Heart and Stroke Foundation of B.C. and Yukon.

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About one in five (21 per cent) non-smokers in the Aboriginal population report being exposed to second-hand smoke, according to the Tobacco Use in BC 1997 survey. Children are particularly affected by second-hand smoke, because of their physical size and stage of development. The amount of time that children spend around smokers determines their risk. Thus, risk is highest when a child's mother or other primary caregiver smokes near children. Aboriginal children are much more likely to be exposed to tobacco smoke in the home than are other children. In almost one-third of Aboriginal households with children (32 per cent), there is daily or nearly daily exposure (Figure 6.3).

Mould is a common problem in houses, both in Aboriginal and non-Aboriginal communities. A study in one First Nations community found that more than half of the homes had excessive mould growth, leading to real or perceived health risks (Lawrence & Martin, 2001). Coughs, asthma, and bronchitis occur more frequently among people exposed to mould.

Crowded and poorly ventilated homes intensify the impacts of second-hand smoke, mould, and other indoor air pollutants. Higher occupant density means that, on average, Aboriginal people are breathing in even higher concentrations of pollutants than they would in a more spacious home. The basic advice for dealing with mould or other biological contaminants is to keep houses clean, dry, and well-ventilated and to remove the source or reduce the level of the pollutant. Yet, some of the dampest homes are located on reserves and in low-income neighbourhoods, where families may have insufficient income to correct housing problems.

What exactly is the level of indoor air quality in Aboriginal homes in B.C.? We can't say precisely, but data on second-hand smoke exposure and housing quality suggest that it is substantially worse, on average, than other British Columbians, and this could explain, in part, the higher levels of respiratory illness experienced by the Aboriginal population. Indoor air quality is not a strictly a mould problem or a second-hand smoke problem – it's a problem of substandard housing.

Outdoor air pollution is another environmental risk that has a significant impact on health in many areas of British Columbia. In 1998, about three-quarters of communities monitored exceeded the fine particulate (or $PM_{10}$) levels at which health effects are known to occur, more than 5 per cent of the time (B.C. Ministry of Water, Land and Air Protection, 2000). Air pollution levels are highest in the interior and rural areas of the province. The Aboriginal population may face a higher risk, as they are more likely to live in rural areas. Outside the Greater Vancouver area, beehive burners, pulp and paper mills, railways, burning, and smoke from wood stoves are the major sources of $PM_{10}$. In recent years, there have been some significant reductions in air pollution levels, through development of air quality management plans, continued phase-out of beehive burners, regulation of large-scale open burning, and higher standards for wood stoves.

## Drinking Water

Some Indian reserves have inadequate drinking water systems, but there are also examples where water treatment on-reserve is "state of the art" – and better than the water systems in place in surrounding communities.

There are about 468 First Nations' water systems, serving 16,025 households that fall under the jurisdiction of the local band and the federal government. Indian and Northern Affairs Canada collects data about these systems in its community infrastructure database, and summary reports are produced annually. The most recent report showed that 82 per cent of housing units had water supplies that met the health-related requirements of the *Guidelines for Canadian Drinking Water Quality* (Table 6.1). Comparable data are not available for the 3,016 water systems under provincial jurisdiction (Provincial Health Officer, 2001).

### Table 6.1 — Water Quality On-Reserve, B.C. 1998 - 1999

**Number and per cent of housing units with water supply categorized as:**

| Meeting requirements for | | | |
|---|---|---|---|
| Water quality GCDWQ | Volume INAC | Number | Per cent |
| Yes | Yes | 12,143 | 75.8% |
| No | Yes | 2,769 | 17.3% |
| Yes | No | 796 | 5.0% |
| No | No | 317 | 2.0% |
| Total | | 16,025 | 100.0% |

Source: Indian and Northern Affairs Canada (INAC). 1999 Housing and Infrastructure Assets Summary Report, page 18.
http://www.ainc-inac.gc.ca/pr/sts/index_e.html

Notes:

[1] Water supply that satisfies the health-related requirements of the Guidelines for Canadian Drinking Water Quality, 5th edition (1993). A water system is not deemed inadequate because aesthetic objectives are exceeded.

[2] Water supply that satisfies the volume requirements of INAC Level of Service Standard (LOSS) for adequate hygiene and safety purpose.

In First Nations communities, the responsibility for drinking water is shared between Band councils and the federal government. Band councils are generally responsible for ensuring water facilities are built and operated in accordance with federal or provincial standards, whichever are more stringent.

Indian and Northern Affairs Canada provides capital funding to assist First Nations in the construction and upgrading of water systems, as well as covering a portion of the operation and maintenance costs. Funding has been made available for all First Nations on reserve to provide water filtration treatment, an advanced form of treatment that removes parasites that are not killed by disinfection. In B.C., there are 27 filtration plants on First Nation reserves, compared with 11 filtration plants in the rest of B.C. communities. Kamloops First Nation is an example of a community that has moved ahead with upgrading; the reserve has far better drinking water quality than the surrounding community, even though it draws its water from the same source. By 2005, it is estimated that all B.C. First Nations on reserves will have filtration systems for their drinking water supplies.

### Skidegate Water Treatment Plant

The Skidegate Water Treatment Plant is located on the Skidegate native reserve on the Queen Charlotte Islands, known as Haida Gwaii. The plant purifies 300 to 400 cubic meters of water per day on average to serve the needs of 850 residents. This system has improved the well-being of the residents of Skidegate, offered economic benefit to the community, and allowed the community to develop local expertise.

For years, the Skidegate reserve treated its water from Slarkadus Creek by chlorination. Chlorine kills many of the micro-organisms that cause disease, but it does not always kill parasites such as *Giardia* and *Cryptosporidium* that are common in B.C. waters. The water was also very turbid (cloudy) and needed high amounts of chlorination. The community determined a water treatment plant was required to ensure their health, and collectively developed a proposal for a new water treatment plant on their reserve.

In cooperation with the federal government, in 1996 the community built a new Class 3 water treatment plant, which provides aluminum sulfate pre-treatment, rapid sand filtration, chlorination, and pH adjustment with limestone. The plant has substantially reduced the risks of waterborne illness and has also decreased the need for chlorination from 22 litres a day to between 5 and 8 litres a day.

To run the plant, the Skidegate reserve developed local expertise by sponsoring two level 1 certified water treatment plant operators who self-trained through correspondence with the California State University, Sacramento, College of Engineering and Computer Science. The operators are members of the B.C. Water and Waste Association and attend seminars periodically. Skidegate is also on the safe drinking water program funded by Health Canada. The plant operators do their own coliform testing and sampling in-house, and do not have to send samples out for analysis.

This is a sophisticated and comprehensive water treatment plant that more than meets provincial standards and the needs of the community. Since its installation, the system has had good water sampling results and has never had an incidence of *E.coli*.

Environmental health officers, employed by Health Canada, monitor the water quality of First Nations communities as part of an ongoing surveillance program. In addition, they provide assistance to First Nations communities in identifying and resolving water quality and quantity issues, inclusion of technical training, and provision of portable micro-lab services and public health education. Current program thrusts include development of safe drinking water protocols, internet-based water quality data management, enhanced community monitoring programs, and support for the training and certification of water treatment operators.

The federal government is gradually devolving some of these responsibilities to First Nations. In determining the appropriate level of water treatment, a decision is made by each First Nation and its technical advisors. A recent report titled "Safe Drinking Water on First Nation Reserves - Roles and Responsibilities" outlines the roles of federal and provincial health authorities in Canada (Indian and Northern Affairs Canada, November 2001).

With drinking water treatment in hand, the key now is good operational practice and quality assurance, to ensure that the capital invested in water systems will pay off in terms of health benefits. Ongoing monitoring is required to make sure that systems are up and running and properly maintained.

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In B.C., Indian and Northern Affairs Canada has developed the "Circuit Rider" training program that provides on-site training to First Nation maintenance personnel in the operation and maintenance of their water and sewage facilities (N. Rayner, personal communication, March 15, 2001). Beyond the Circuit Rider program, First Nations plant operators are encouraged to obtain certification to the same level of provincial standards, although there are currently no requirements for the use of certified personnel in on-reserve water systems.

**Provincial Health Officer's Report on Drinking Water**

For more information about drinking water in B.C., see the Provincial Health Officer's Annual Report 2000, Drinking Water Quality in British Columbia: The Public Health Perspective. Copies are available from the Office of the Provincial Health Officer, telephone (250) 952-0876, or on the Internet at http://www.healthplanning.gov.bc.ca/pho/ar/index.html.

## Environmental Change

Aboriginal peoples have a strong social, cultural, and spiritual attachment to the land. When the physical environment is changed, there can be profound impacts on Aboriginal communities, although the impacts are sometimes difficult to prove scientifically.

### Environmental Contaminants

Living in contaminated areas or eating contaminated foods can result in illnesses of various types, either immediately or later in life. Environmental contaminants can enter food, water, or soil from industrial plants, garbage dumps and industrial waste, air or water currents, or rainfall. In Canada, northern Aboriginal people who consume traditional diets are at increased risk of exposure because toxic contaminants tend to accumulate in wild meat (moose, caribou, deer, etc.), fish, and marine mammals.

Some northern communities have levels of mercury, PCBs, or other contaminants that exceed Health Canada's guidelines. (Exceeding guidelines does not necessarily mean that people are becoming ill.) Mercury exceeding guideline levels has been found in some people living in northern Ontario and Quebec. The mercury accumulated in fish, which were in turn consumed by members of the community. PCBs are another contaminant of concern. A study of Inuit women in northern Quebec show a PCB concentration 7 times greater than a comparison group of European women in southern Quebec (Smylie, 2001). The province of B.C. does not carry out regular surveys of people's exposure to environmental contaminants, except in areas where problems are known to have occurred, e.g., exposure to lead near the city of Trail.

For the Aboriginal population, Health Canada runs a human hair and blood sampling program that estimates the risk to individuals from mercury, PCBs, and certain pesticides. A Health Canada report published in 1999 presented comprehensive results on hair mercury test results for the period 1972 to 1996. Results showed that mercury levels were steadily falling and that direct health risks across Canada were minimal. In the B.C. samples, no "at risk" levels of mercury had been found since the late 1970s. Only three individuals showed an "at risk" level of mercury (greater than 100 ppb), of the 2,970 individuals in 90 communities tested, and all three were early in the study period (Health

Canada, 1999). Since then, the program has continued to monitor the situation at a less intensive level, concentrating on follow-up in communities where higher levels had been found, adding new communities where appropriate or on request by the communities themselves.

Waste dumping is another form of environmental contamination that can threaten human health and safety. There have been several cases where illegal waste dumping has occurred on reserves in B.C., but violation of dumping laws does not necessarily indicate a threat to human health. A 1992-1997 survey of 800 reserves across the country found over 2,400 issues and problems with the handling and dumping of waste (old fuel storage tanks, wood waste, old automobiles, construction waste, etc.). In a subsequent case study in the Fraser Valley region of B.C., bands were aware of the waste sites, but enforcement was a problem (Indian and Northern Affairs Canada, Corporate Services, 1997). The dumping wouldn't have been allowed under provincial regulations, but those don't apply on reserves. Waste dumps are not aesthetically pleasing, but in most cases they represent a regulatory compliance issue, rather than a health risk.

## Country Foods

The traditional diet of Aboriginal peoples includes fish, marine mammals, wild meat, and plants. Most of these "country foods" are highly nutritious, and they sustained indigenous peoples successfully for centuries. Harvesting of country foods provides non-nutritional benefits, too, including physical exercise and a culture that involves production and sharing of food (Wheatley, 1996; 1996).

Country foods are subject to environmental contaminants, particularly organ meats. Fear of contamination can lead to changes in eating patterns. The decline of traditional food, along with increased consumption of less nutritious store-bought foods, can negatively affect people's health status. This may actually be responsible for significant illness (increased diabetes, for example) in some Aboriginal communities.

Mercury in some B.C. fish can exceed canned commercial tolerance levels. But should Aboriginal people restrict their intake of fish – and lose a high quality source of protein? As with all decisions about the environment, one needs to consider the net risk – would people be better or worse off? By and large, they will be better off with traditional foods, based on existing evidence about the risks of environmental contaminants in B.C. and the nutritional benefits of a traditional diet (R. Copes, personal communication, February 27, 2002).

There is clear evidence of benefits of country foods: nutrition, disease prevention, physical activity, and lower cost. Contamination is one potential risk. This can lead to concerns that country food is hazardous to health, whether or not there is a known or proven link. The Centre for Indigenous Peoples' Nutrition and Environment (CINE) at McGill University provides public information about the benefits and risks of traditional foods (http://www.cine.mcgill.ca/TF/index.htm). In B.C., Health Canada works with provincial public health staff to provide credible information about the possible contamination of foods.

### Traditional Foods and Aboriginal Health

Until relatively recently, First Nations people in British Columbia have relied on traditional foods to meet their dietary needs. Game, fish, shellfish, and a variety of native plants have provided sustenance for B.C. First Nations for thousands of years.

There are many potential health benefits from consuming a traditional Aboriginal diet. Compared to the typical North American diet of food purchased in stores, it is well balanced and contains less of the fats and sugars that may increase the risk of developing heart disease or diabetes. The hunting, fishing, and gathering that are part of consuming a traditional diet also provide the opportunity for exercise and maintaining a spiritual link with the land, cultural roots, and traditions. These, too, may be of health benefit.

In the last couple of decades, researchers and government agencies have carried out many studies showing that traces of chemical contaminants can be found in many ecosystems, including those used historically by Aboriginal people as a source of food. Fear about the risks from consuming traditional foods with traces of contaminants may have led some Aboriginal people to abandon traditional foods in favor of a 'modern' diet.

Based on current monitoring data in British Columbia, consumption of traditional foods is generally associated with more health benefit than risk. This doesn't mean that we shouldn't seek to reduce contaminant levels in affected species. It does mean that we need to look carefully at the benefits and risks from consuming different foods before making any recommendations to avoid traditional food sources.

## Resource Management

Improving the population's health status requires maintaining a delicate balance between the economy and the environment. Large-scale developments such as forestry, mining, gas and oil extraction, and hydroelectric plants can bring industries and jobs to regions that are chronically underdeveloped. But these economic benefits come with potential risks. Development projects can alter the ecosystem, destroying wildlife, traditional foods and medicines, and non-renewable resources. Aboriginal people may not receive an equitable share of jobs and benefits, and a boom and bust cycle can leave communities worse off.

*People to People, Nation to Nation*

> "The Aboriginal people are, by tradition, people of the land. Their very nature is tied strongly to the land, and any answer to the economic problems must include their remaining on the land."
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> Rae Stephenson
> Old Crow, Yukon
> Highlights from the Report of the
> Royal Commission on Aboriginal Peoples, 1996

We lack good summary measures to tell us whether British Columbia's natural resources are being used in a responsible, sustainable manner. But responses to the First Nations and Inuit Regional Health Survey show that 44 per cent of B.C. First Nations perceived "no progress" was being made toward a renewed relationship with the land in their communities (B.C. Regional Health Survey Subcommittee, unpublished tables).

A non-profit organization called NEW (Northwest Environment Watch) issues annual reports on 10 key indicators of environmental well-being in the Pacific Northwest. The status of wild salmon stocks is used to gauge the health of watersheds. NEW's 2002 report finds British Columbia's salmon stocks to be in "short-term boom, long-term bust" condition. Although B.C.'s salmon stocks are healthier than most other Northwest states, salmon abundance has fallen far below historical averages, with 18 per cent of stocks at risk or extinct. The report notes the need for more complete data on salmon stocks and other environmental measures (Northwest Environment Watch, 2002).

### Elder Protects the Environment

Mary Thomas, an elder of the Secwepemc nation, is an educator and a renowned ethnobotanist who travels all over North America to speak on traditional medicines and conservation of the environment for future generations.

Together with researchers from the University of Victoria, Mary Thomas has documented plants used in traditional medicines and has advocated for the preservation of ecosystems in which these plants are found.

In 1997, Mary Thomas received the Seacology Prize for her heroic efforts to protect the salmon fisheries and watersheds of her tribal lands. This award, given annually by the Utah-based Seacology Foundation, recognizes heroic achievement by indigenous leaders who risk their own lives and well-being to protect their ecosystems and cultures. In accepting the award, Mary Thomas said,

> *"With the loss of our plants, waters, animals and air, we as Aboriginal people lose that spiritual connection to Mother Earth and each other and most critical to ourselves. If we do not have that spirituality, then we have no existence."* (Mary Thomas Speech, September 22, 1997, http://www.seacology.org/news/9703.02.html)

## What Targets Are Achievable?

For many environmental health issues, we lack scientific data from which to set measurable goals and targets. However, good risk management suggests that we should be targeting those areas that present the greatest risks to health. This means, for example, focusing on housing quality rather than waste sites, and second-hand smoke exposure rather than the risks of country foods.

The Provincial Health Officer has recommended that a set of key measures be developed for reporting on the quality of British Columbia's drinking water and the performance of drinking water systems (Provincial Health Officer, 2001). The Provincial Health Officer has also recommended that there be no involuntary exposure to second-hand smoke – a target of zero per cent (Provincial Health Officer, 2000).

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### A Checklist of Sustainability Indicators

In recent years, efforts have been made to measure and report on sustainability – the extent to which we are maintaining and improving the health of our ecosystems.

A checklist of sustainability indicators for Aboriginal communities has been developed by the National Round Table on the Environment and the Economy (2001). The indicators were developed through a case study on non-renewable resource development in the Northwest Territories, which illustrates the complex environmental issues that affect Aboriginal communities in Canada. The checklist includes:

Economic Vitality
- Attractive business climate for all investors
- Local retention of benefits
- Balance of traditional and non-traditional economies
- Economic diversification
- Capacity building for Aboriginal people

Environmental Integrity
- Preservation of ecosystem, e.g., intact, not at risk
- Recognition and inclusion of traditional knowledge
- Minimization of pollution
- Identification and mitigation of cumulative effects

Social and Cultural Well-Being
- Retention of Aboriginal traditions, culture, language and way of life
- Meaningful Aboriginal participation in all stages of a development project
- Capacity in Aboriginal communities to address health and social problems

Equity
- Equitable distribution of costs and benefits, e.g., within and among communities, between communities and developers, and across different economic interests and generations.

Control over Natural Resources
- Clearly defined system of governance that respects the rights of all people and supports Aboriginal people's land claim settlements and control over natural resources.

The full report, titled Aboriginal Communities and Non-Renewable Resource Development, is available on the Internet at http://www.nrtee-trnee.ca/Publications/Aboriginal_SOD_E.pdf.

## What Actions Can We Take?

Individuals and families can:

- Maintain a smoke-free home, and encourage others to do so.
- Use newer, less polluting wood-burning stoves.

The health system can:

- Develop ways to monitor indoor air quality and the health effects resulting from second-hand smoke, inadequate heating, and moisture control.
- Continue to provide training and certification for water system operators and make this mandatory, with subsidies to enable participation. Provide monitoring to make sure systems are adequately maintained and achieving health benefits.

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Governments can:

- Support Aboriginal communities to identify and address local housing needs, e.g., by supporting loan funds operated by First Nations organizations or by offering courses on technical or administrative subjects.
- Work with First Nations, on a priority basis, to make continued improvements in drinking water systems on reserve.
- Encourage research and public discussion about environmental risks and the options for managing them, using both traditional and scientific knowledge.
- Encourage public reporting on the impact of human activities on fish stocks, forest areas, mineral supplies, and other natural resources.

# 7. Health Services

*This chapter describes health services available to Aboriginal peoples in British Columbia today, how those services are organized and delivered, and how those services contribute to Aboriginal health. Data on health services access and utilization are included, for example, data on Aboriginal peoples' use of physician and hospital services, prescription drugs, mental health follow-up services, and dental surgeries. The importance of culturally-appropriate services and empowerment, and ways to improve gaps and fragmentation of services are also discussed.*

The publicly-funded health care system provides a wide range of services designed to keep people healthy, treat illnesses and injuries, restore function, and care for the vulnerable. For Aboriginal people, ongoing federal/provincial jurisdictional and funding issues have created gaps and inadequacies in services. Some of the acknowledged needs are:

- Improved Aboriginal access to health programs and services;
- Greater Aboriginal control and involvement in decisions about health services; and,
- Improved working relationships with health authorities and service providers.

This chapter takes a look at some examples of progress and activities in these areas.

## Highlights

- Status Indians use more hospital services – but fewer long-term care services – than other B.C. residents. Usage rates for Medical Services Plan services are similar in the Status Indian and other B.C. populations. Given their poorer health status, we would expect to find higher utilization rates among Aboriginal people. Unfortunately, utilization rates don't tell us whether people are receiving the services they need.

- Status Indian children have high rates of tooth extractions and other restorative dental work done in hospitals. The majority of these children are being treated for early childhood caries, a preventable disease.
- One in five Status Indian women over 50 and one in ten men in the same age group are prescribed tranquilizers or sleeping pills each year. Although these rates do not differ greatly from the general population, this does not necessarily mean that the treatment was appropriate.
- Many Aboriginal people with mental illnesses are not receiving the follow-up services they need. Of the Status Indian cases admitted to acute care hospitals for psychiatric reasons, only 60 per cent have contact with a community mental health centre or a private physician within 30 days of discharge.
- Many Aboriginal people feel that they are "outside" the mainstream health system. Jurisdictional issues, lack of sensitivity to Aboriginal culture, and lack of services are some of the barriers that Aboriginal people identify.

## Responsibility for Health Care

Aboriginal people receive health services through a unique combination of federal, provincial, and Aboriginal-run services, as well as other programs and services. Responsibility for delivery of health care to Aboriginal people in Canada has been the subject of considerable debate regarding jurisdictional responsibility. For many years, the lack of coordination between various levels of government and Aboriginal community agencies has resulted in fragmented services or a lack of services for Aboriginal people.

The federal government has accepted responsibility for ensuring the provision of health care services to Status Indians and Inuit. In the Yukon, Northwest Territories, and Nunavut, these services are provided by the territorial governments. In the provinces, health services are provided collaboratively by the provincial and federal governments in partnership with the First Nations. In British Columbia, more than 50 per cent of First Nations are managing their own health services on reserve.

Historically, the federal government of Canada has recognized that a special relationship exists between it and Status Indians with respect to the provision of health care. However, this responsibility is largely defined as a matter of policy and goodwill and is not considered by the courts to be a legal obligation.

The question of whether a treaty right to free, comprehensive medical services exists for Status Indians is one of the most controversial areas of Aboriginal health care. While the courts have ruled in favor of the federal government view that no such right exists, treaty language written in the last century speaks of access to a "medicine chest," in reference to a government commitment to provide health resources. Many Aboriginal organizations argue that the spirit and intent of the "medicine chest clause" mean that Aboriginal people have a right to be provided with the best possible health care available at the time (Royal Commission on Aboriginal peoples, 1996; Smylie, 2001).

The provincial government has direct responsibility for providing all aspects of health care delivery to all residents of British Columbia, including Status Indians and non-status Indians living off-reserve, the Inuit, and Métis.

The federal government currently provides a block transfer payment to the province for cost-shareable programs, contracted services, and Medical Services Plan (MSP) premiums for Status Indians. Estimation of health care expenditures for Status Indians is calculated on a per capita basis and does not reflect actual utilization costs. The federal government also provides funding for targeted programs that address particular health needs such as:

- nursing care, nutrition, dental health, mental health, environmental health, communicable disease control on reserve;
- the National Native Alcohol and Drug Abuse Program, Aboriginal Head Start, and the Canada Prenatal Nutrition Program;
- the Non-Insured Health Benefits Program, which pays for prescription drugs, dental care, vision care, provision of medical devices and equipment, and transport from isolated communities for necessary services. This program is available for Status Indians on and off reserve.

## Devolution of Health Services

Over the past two decades, significant changes have occurred in the delivery and control of health services, for both Aboriginal and non-Aboriginal communities. The devolution of health services provides opportunities for local decision-making and control, but it also presents some challenges to maintain overall planning and program standards.

The federal government's health transfer program is recognized both nationally and internationally as a significant achievement in restructuring health services to First Nations communities. Launched in 1986, the health transfer program allows community health services to be transferred to First Nations governed and managed health organizations. Community health services eligible for transfer include environmental health, and treatment and prevention services, along with the appropriate Medical Services Branch facilities. As of February 2002, 34 transfer agreements had been signed in the Pacific region, and 6 were in the pre-transfer phase; these agreements affect 115, or 58 per cent, of First Nations communities.

Since 1994, the provincial government has been moving to decentralize authority for planning and managing health services to regional health authorities throughout the province. The current governance structure consists of five regional health authorities, each serving a defined geographic area of the province, and the Nisga'a Valley Health Board, which serves residents of the Nass Valley. In 1998, the Nisga'a Valley Health Board became the first Aboriginal group in Canada to entirely administer their own health care program, with federal and provincial funding for services provided in the community.

British Columbia's health authorities are required to create Aboriginal Health Plans that identify and address Aboriginal health service priorities for their regions. Those plans must address improved access to service and increased Aboriginal involvement in decision-making and planning for their population, and they must show establishment of a meaningful working relationship with the Aboriginal community. Requirements for Aboriginal health planning were distributed to health authorities in August 2001, with submission of the plans set for September 2002 (B.C. Ministry of Health Planning, March 2000). The Plan requirements build on 50 recommendations for improving Aboriginal people's involvement in the health authority process (Aboriginal Governors Working Group, December 1999).

B.C. health authorities have been increasing their Aboriginal staffing and expertise. Three health service delivery areas have Aboriginal health managers, and most employ hospital or community Aboriginal liaison workers. *A Health Authorities Handbook on Aboriginal Health* was produced in 1999, providing basic information to assist in planning services to meet the needs of Aboriginal communities (Aboriginal Health Association of B.C., 1999). The Provincial Health Authorities announced a new program, the Aboriginal Health Initiatives Program, in the summer of 2002. This program provides approximately $5 million in targeted disease prevention and health promotion funding for addictions, mental health, and chronic disease management.

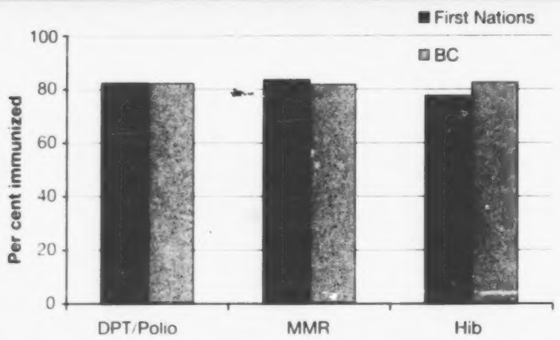
At the provincial level, the Ministry of Health Planning is working with Aboriginal health stakeholders to develop a strategic approach to improve the health status of the Aboriginal population. Release and implementation of the Provincial Aboriginal Health Services Strategy is anticipated for April 2003. The Steering Committee includes the following political, health, and advocacy groups:

- First Nations Chiefs' Health Committee, a committee of the First Nations Summit (First Nations engaged in the treaty process);
- Union of B.C. Indian Chiefs;
- Métis Provincial Council of B.C.;
- United Native Nations (representing urban off-reserve Aboriginal people);
- Community Health Associates of British Columbia;
- B.C. Aboriginal Network on Disabilities Society; and
- Pacific Association of First Nations Women (representing the Council of Aboriginal Women in B.C.).

There has been past representation from the B.C. Association of Friendship Centres and the former Aboriginal Health Association of British Columbia.

**Fig. 7.1**

**Immunization Rates, Two-Year-Old Children, B.C.**



Sources: (1) First Nations Data: First Nations and Inuit Health Branch, Health Canada. Report of Immunization Status of Children with Child Health Records born April 1999. (2) B.C. data: B.C. Ministry of Health Services, November 2001.
Notes: First Nations data are for on-reserve children who were two years old in 2000. B.C. data are for children who were two years old in April 2001, and for whom child health records were available.

## Access to Services

Accessibility is one of the fundamental principles of Canada's health system. Unfortunately, accessibility is difficult to define and measure with available data. The need for standards and better information has been recognized; "developing clearly defined provincial standards for equitable and timely access to health care services" is one of the objectives recently set by the Ministry of Health Planning (B.C. Ministry of Health Planning, 2002). Utilization rates – the proportion of the population who use specific services – provide one way of measuring accessibility.

## Childhood Immunization

Most First Nations children – about 80 per cent – are protected against eight vaccine-preventable diseases: diphtheria, pertussis, tetanus, polio, Haemophilus influenza type b (Hib), measles, mumps, and rubella. These rates are comparable to the provincial average (Figure 7.1).

Based on the 1997 and 2000 figures, there has been a slight reduction in immunization coverage. Trends for the provincial system have also shown a slight reduction in recent years. First Nations children in the mainland areas of the province have achieved immunization rates that are very close to national targets (97 per cent), while those living on Vancouver Island are less likely to be fully immunized. The reasons for these regional differences require further investigation.

The B.C. government is working with the Provincial Health Officer to develop ways to introduce three new vaccines into the childhood immunization program. These include varicella (chickenpox), pneumococcal, and meningococcal group C. The new programs will be phased in over the next few years, because the delivery system does not have the capacity to absorb three comprehensive programs in a single year. Aboriginal children appear to be at increased risk of pneumococcal disease, a major cause of childhood meningitis, pneumonia, and middle ear infection. Accordingly, the Provincial Health Officer has recommended that pneumococcal immunization for Aboriginal infants be implemented as early as January 2003.

## Cancer Screening

Aboriginal populations have historically had low rates of cancer, except for one or two sub-types, notably cancer of the cervix (Gallagher & Elwood, 1979; Young & Frank, 1983; Young & Choi, 1985). For all cancers combined, Status Indians and other British Columbians have roughly the same death rate (16.4 vs. 15.8 per 10,000 in 2000), although cancer claims younger lives in the Status Indian population. Cancer rates among Aboriginal people may change over time, as smoking, dietary changes, and other cancer risk factors work their way through the population. Screening is a key activity in preventing and controlling some types of cancer, especially cancers of the cervix and breast.

### Pap Tests

Pap smear screening rates have been substantially lower among First Nations women than among other B.C. women. In 1990, the B.C. Cancer Agency did a study that involved matching records in the Pap smear registry against band membership lists. Only half of First Nations women (age 18 to 69) had had a pap test within the last three years, while the figure for the B.C. population overall was 85 per cent. For both groups, Pap smear rates were highest among younger women, declining in the older age groups. The proportion of Status Indian women with regular Pap smears was lower in each age group, with a difference of approximately 30 per cent (Hislop, Deschamps, Band, Smith, & Clarke, 1992).

Lack of knowledge about the test, feelings of embarrassment, and lack of continuity of care due to high turnover of physicians in First Nations communities were some of the reasons that Aboriginal women gave for not having Pap tests (Hislop et al., 1996). Acting on that information, efforts have been made to increase the accessibility of this service to

Aboriginal women. B.C. Women's Health Centre currently has an Aboriginal Health Program with a major focus to deliver Pap smears to Aboriginal women throughout the province (http://www.cw.bc.ca/bcw/aboriginal_health.asp).

There has not been any recent analysis of Pap smear rates for Aboriginal women. Health Canada and the B.C. Cancer Agency have recently signed a data-sharing agreement that will allow routine data linkage to identify Status Indian records in the B.C. Cancer Agency's Cancer Registry. With this agreement now in place, it will be possible to track improvements in Aboriginal women's use of this highly effective cancer screening test.

Mortality from cervical cancer remains high among Status Indian women compared to other B.C. women (4 per 100,000 versus 2 per 100,000 for the period 1991-2000). However, the gap has been reduced substantially from the period 1973-1984, when there was a six-fold difference in rates (Hislop, Band, Deschamps, Clarke, Smith & Ng, 1994).

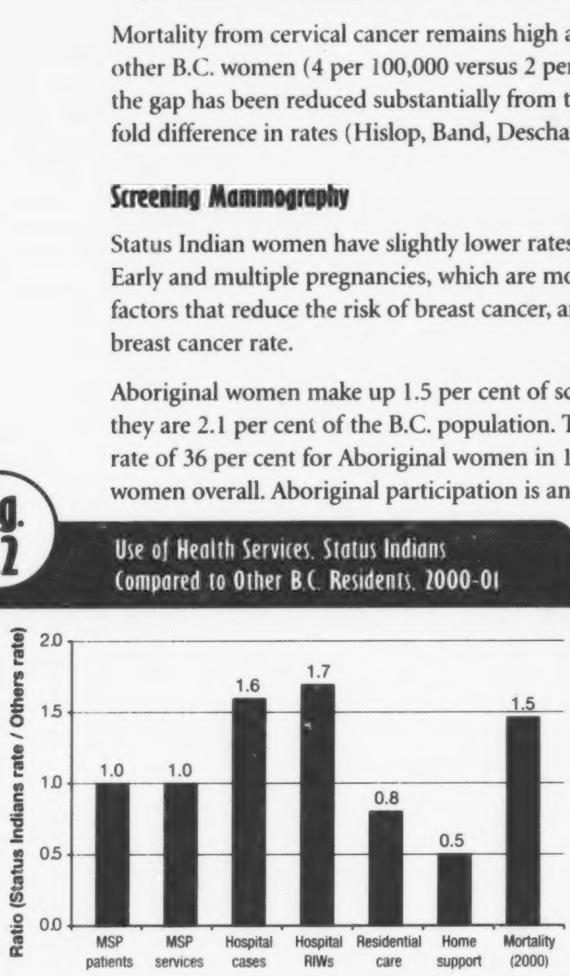
### Screening Mammography

Status Indian women have slightly lower rates of breast cancer than other B.C. women. Early and multiple pregnancies, which are more common among Aboriginal women, are factors that reduce the risk of breast cancer, and these may account for the slightly lower breast cancer rate.

Aboriginal women make up 1.5 per cent of screening mammography participants, while they are 2.1 per cent of the B.C. population. This translates into an estimated participation rate of 36 per cent for Aboriginal women in 1999-2000, compared to 49 per cent for B.C. women overall. Aboriginal participation is an estimate, based on women who attended the Screening Mammography Program of B.C. in 1999-2000 and who responded to the ethnicity question on a questionnaire completed at their first mammography appointment. Although participation may be under-estimated, there are opportunities to improve Aboriginal women's participation in this program for early detection of breast cancer.

**Fig. 7.2**

**Use of Health Services, Status Indians Compared to Other B.C. Residents, 2000-01**



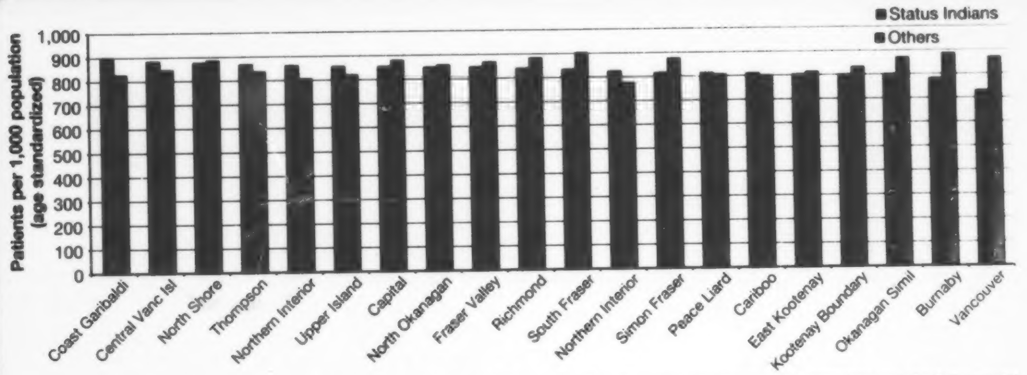
This chart shows the ratio of age standardized utilization rates for Status Indians compared to other B.C. residents. A ratio of 1.6 means that the Status Indian population used 60 per cent more services than others. MSP patients refer to the number of individuals who saw at least one physician (including medical health professionals such as chiropractors and physiotherapists) in 2000-01. RIWs are Resource Intensity Weights, weighted units of hospital activity used to estimate the relative costs of treating different types of patients. Residential care and home support refer to days of care in long-term care facilities and hours of home support services. Mortality is the ratio of age standardized mortality (death) rates in 1999.

Sources: (1) Utilization data prepared by Information Support, B.C. Ministry of Health Services, Project 2001-288. (2) Mortality data are from B.C. Vital Statistics Agency, July 2001.

The B.C. Cancer Agency's Screening Mammography Program has a number of strategies to recruit Aboriginal women to the screening program. These include expanding access to sites with a large Aboriginal population, working with community health representatives to organize group appointments so that native women can attend together to their nearest screening site, and working with community health representatives and public health nurses to promote the benefits of screening.

Fig. 7.3

MSP Utilization Rates, B.C. Health Regions, 2000-01



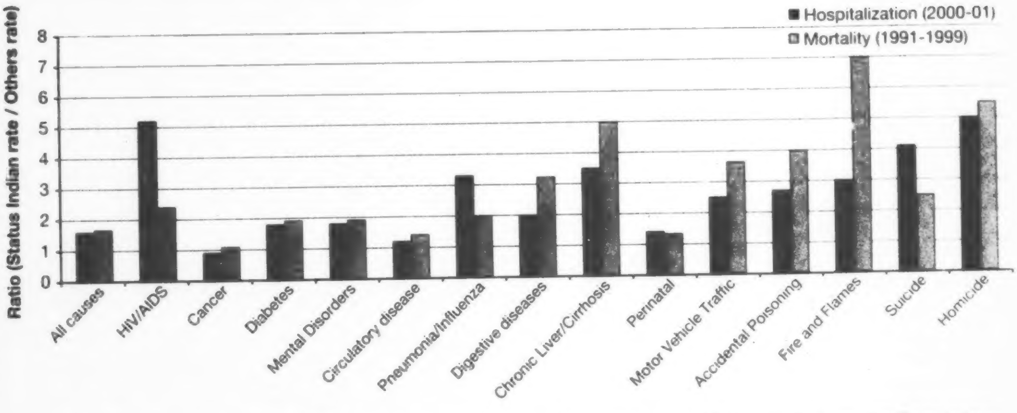
The number of patients who saw at least one physician (including medical health professionals such as chiropractors and physiotherapists) in 2000-01, as a rate per 1,000 population. Data are based on pracitioner billings to the provincial Medical Services Plan.
Source: Medical Services Plan Claims Database. Prepared by Information Support, B.C. Ministry of Health Services, Project 2001-288.

## Treatment and Support Services

On average, Status Indians use as many medical services and more hospital services – but fewer long-term care services – than other B.C. residents (Figure 7.2). Given the poorer health status of Aboriginal people, we would expect to find higher utilization rates in this population, and data confirm this to be true, at least for services provided in hospitals. (For data on use of support services, see Disabilities, page 106).

Fig. 7.4

Hospitalization and Mortality Rates, Status Indians Compared to Other B.C. Residents



Ratio of age standardized rates for Status Indians compared to other B.C. residents. A ratio of 2, for example, means that Status Indians have twice the rate of hospitalization (or deaths) as do other British Columbians.
Sources: (1) Hospital data prepared by Information Support, B.C. Ministry of Health Services, project 2001-288. (2) Mortality data from B.C. Vital Statistics Agency, July 2001.

Eighty-three per cent of Status Indians visit a doctor or other practitioner in a given year, compared to 87 per cent for the rest of the population. Status Indians' use of medical services is comparable to other residents of their health regions, except in Vancouver and Burnaby, where Status Indians use fewer services than others (Figure 7.3).

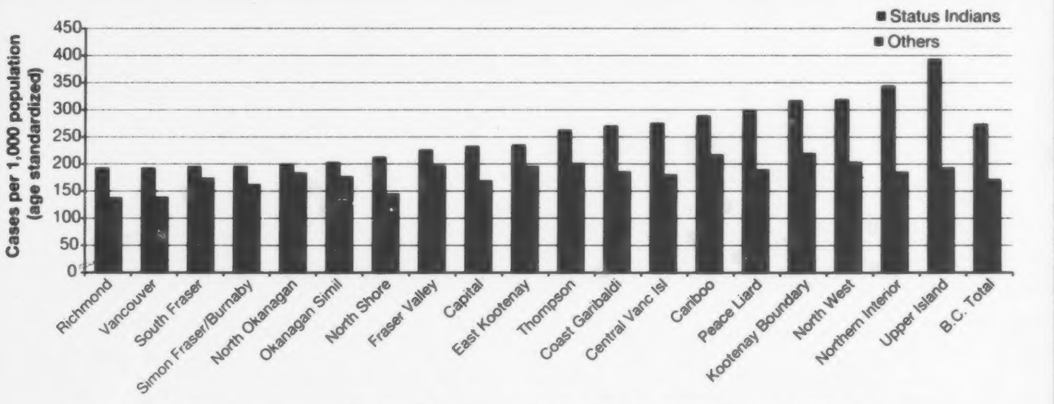
Status Indians have hospitalization rates that are 1.6 times the rates of other British Columbians, and those who are admitted to hospital have a higher Resource Intensity Weighting (RIW), which suggests that they are "sicker" than other patients. These figures provide a glimpse at overall utilization, but we do not know what the ideal rate of use would be, or whether the services provided were the most appropriate way to meet Aboriginal peoples' needs.

Digestive system diseases, pregnancy and childbirth, and injuries were the most common reasons for Status Indian admissions to hospital. In terms of days spent in hospital and RIWs, respiratory diseases and mental illnesses were other leading causes. Compared with other B.C. women, Status Indian women have 50 per cent more admissions for pregnancy and childbirth, proportionate to their higher rates of pregnancy (100 vs. 66 pregnancies per 1,000 women age 15-44 in 1999). For labour and delivery, the average length of stay in hospital was about the same for Status Indian (2.7 days) and other B.C. women (2.8 days).

In almost every disease category, Status Indians had higher rates of hospitalization, similar to the pattern of higher mortality (Figure 7.4). The exception was breast cancer in women, for which Status Indians had a slightly lower rate than other B.C. women. The pattern of higher hospital utilization occurs in all regions of the province, with Upper Island and Northern Interior regions having the highest rates and the greatest excess over other area residents. For British Columbians overall, hospitalization rates are lowest in and near Vancouver, and this is also the case for Status Indians (Figure 7.5).

Fig. 7.5

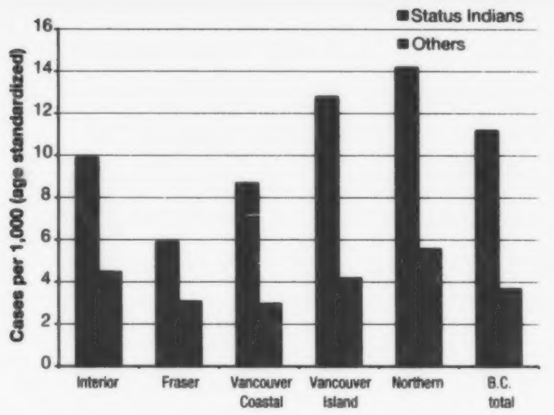
Hospitalization Rates by Health Region, Status Indians and Other B.C. Residents, 2000-01



Source: Morbidity Database. Prepared by Information Support, B.C. Ministry of Health Services. Project 2001-288.

**Fig. 7.6**

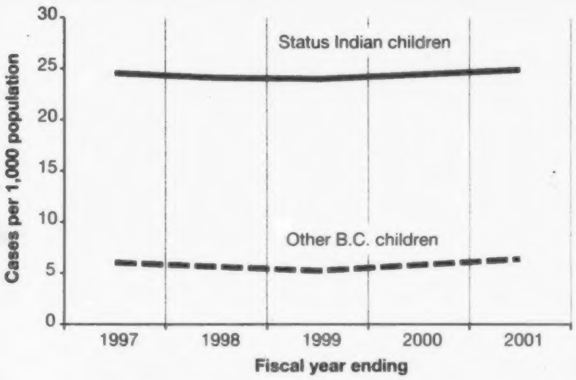
**Preventable Admissions to Hospital, B.C. 2000-01**



Acute care hospitalizations (cases) with a primary diagnosis of diabetes, alcohol and drug-related conditions, neurosis, depression, hypertension, or asthma.
Source: Morbidity Database. Unpublished tables prepared by Information Support, B.C. Ministry of Health Services, project 2001-288.

**Fig. 7.7**

**Hospitalizations for Dental Procedures, Children Age 0-14, B.C., 1996-97 – 2000-01**



Age standardized rates for tooth extraction, surgical removal of teeth, and other operations on teeth (Surgical Short List Codes 041-043), inpatient and day surgery.
Source: 1997 data: PURRFECT 2.23 and Status Indian Health Utilization Database. 1998-2001 data: Morbidity Database. Information Support, B.C. Ministry of Health Services, project 2001-288.

## Preventable Admissions

Compared to other British Columbians, Status Indians are three times as likely to be admitted to hospital for diabetes, asthma, hypertension, neurosis, depression, or abuse of alcohol or other drugs – conditions that can usually be managed in the community, without the need for hospital admission (Figure 7.6). Based on mortality rates and other data, we know that most of these conditions are more common among Aboriginal people, so that we would expect a greater need for medical care. But this high rate of "preventable admissions" can also indicate problems with availability of front-line care in doctors' offices, clinics, or other community settings.

## Dental Surgeries

In the Provincial Health Officer's 1997 annual report, it was recognized that dental surgeries were the most common surgical procedures that B.C. children receive in hospital, with Status Indian children accounting for 16 per cent of the cases. Updated data show that Status Indian children continue to have high rates of tooth extractions and other restorative dental work done in hospitals, compared to children who are not Status Indian (Figure 7.7).

Some of these children may be receiving extensive surgery for cleft lip or palate abnormalities or third molar extractions, but the majority (about 60 per cent) are under the age of 5 and are likely being treated for early childhood caries (Association of Dental Surgeons of B.C., 2001).

Early childhood caries, including nursing bottle decay, is the severe form of dental caries in toddlers that can lead to destruction of primary teeth. Bottle tooth decay is caused by frequent or prolonged use of nursing bottles or sweetened pacifiers. Breast milk, cow's milk, sugared water, fruit juice, or other sugary beverages all contain sugars that can cause tooth decay if left in contact with the teeth for lengthy periods of time, such as when bottles are used during rest or sleep or when "comfort bottles" are used throughout the day.

Community surveys in B.C. have found high rates (50 to 60 per cent of preschool children) of nursing bottle tooth decay in Aboriginal communities (Harrison & White, 1997). National surveys demonstrate that caries in permanent teeth has been decreasing, yet, caries in primary teeth remains high and quite extensive among Aboriginal children. This early destruction of primary teeth explains in part the increased prevalence of severe malocclusion in Aboriginal children compared to the rest of the population (MacEntee, Harrison, & Wyatt, 2001).

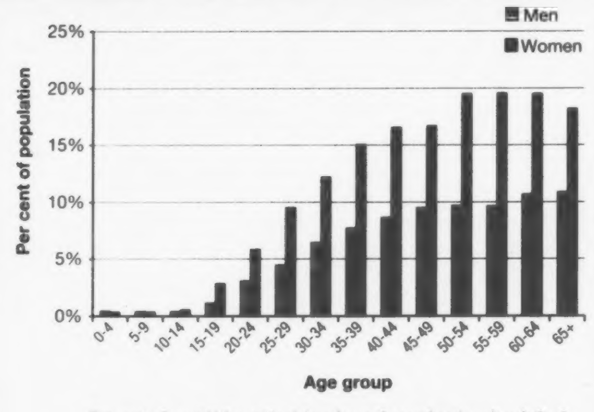
Most childhood dental disease is preventable through dentally-healthy child feeding practices, access to regular dental care, and exposure to fluorides. But financial, cultural, social, and geographic barriers contribute to lack of prevention and treatment.

Health Canada provides dental benefits for Status Indians, and the provincial government provides dental care to children in low-income families through the Healthy Kids program. Access to dental insurance helps, but that alone will not eliminate disparities in caries experience. Dental caries has been called a "biosocial infectious disease", and its prevention and treatment should take into consideration all the factors that may lead to development, only one of which is access to dental care. In a recent Nova Scotia study, socio-economically disadvantaged children did not achieve the same low level of caries as children in more advantaged families, in spite of having access to a dental insurance program (Ismail & Sohn, 2001).

There are community initiatives specifically focussed on the problem of early childhood caries among First Nations children. Programs to promote the use of traditional child comforting practices rather than over-use of bottles and soothers are one example. The use of fluoride varnish is another effective practice that is being promoted in B.C.

Fig. 7.8

Prescriptions for Anticonvulsant and Sedative/Hypnotic Benzodiazepine Drugs, Status Indians, B.C., 2000



Per cent of population with claims for anticonvulsant and sedative/ hypnotic benzodiazepine drugs (PTC code 28:12.08 and 28:24.08). Source: Non-Insured Health Benefits Program, Health Canada. Unpublished tables, November 2001.

## Prescription Drug Use

Prescription data do not tell us whether people are receiving appropriate treatment, but they do provide a first step toward understanding where potential problems might be.

One in five Status Indian women over 50 and one in ten men in the same age group were prescribed benzodiazepines such as Valium and Ativan in the year 2000 (Figure 7.8). Use of anti-depressants was also common, with 12 per cent of Status Indian adults (over age 25) receiving a prescription (Figure 7.9).

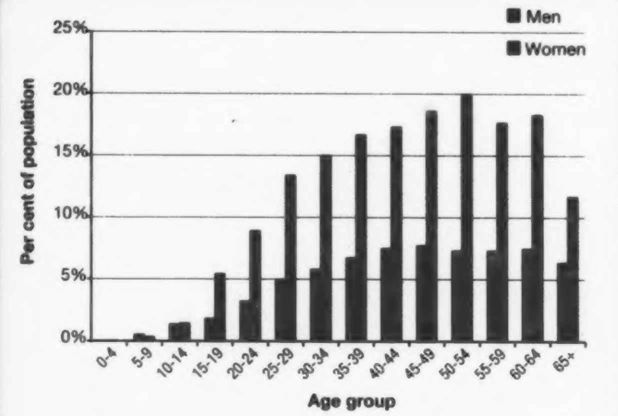
Depression is one of the most common mental illnesses. Five per cent of British Columbians suffer from depression in any given year, according to the

National Population Health Survey, but comparable data for the Aboriginal population are not available. Depression can be treated successfully in most patients, using psychotherapy, medication, and other treatments. Women are twice as likely as men to be diagnosed with depression, so the higher prescription rates for women are not surprising.

A 2000 study found that registered First Nations' use of benzodiazepines and acetaminophen with codeine was moderate and within the bounds found for the general population. Status Indians' use of benzodiazepines was higher than the general Canadian population, but lower than the income assistance population of British Columbia (Anderson & McEwan, 2000).

Fig. 7.9

Prescriptions for Anti-depressants, Status Indians, BC 2000



Per cent of population with claims for anti-depressant drugs (PTC code 28:16.04).
Source: Non-Insured Health Benefits Program, Health Canada. Unpublished tables, November 2001.

Are these rates too high? Based on current knowledge and data, there is not a strong argument supporting the theory of overuse of prescription drugs, except perhaps in prescribing of benzodiazepines in the elderly.

While benzodiazepine prescribing rates for First Nations are consistent with the general population, this does not necessarily mean they are acceptable or good medical practice. Many people who experience anxiety, depression, or insomnia are treated with benzodiazepines – drugs that can be addictive. Although their symptoms are real, the treatment may not always be appropriate. An ideal approach would be to address the reasons for underlying problems that are causing the depression and anxiety and to provide non-medication therapies, where appropriate, for pain, sleep, and anxiety disorders.

## Antibiotic Prescribing

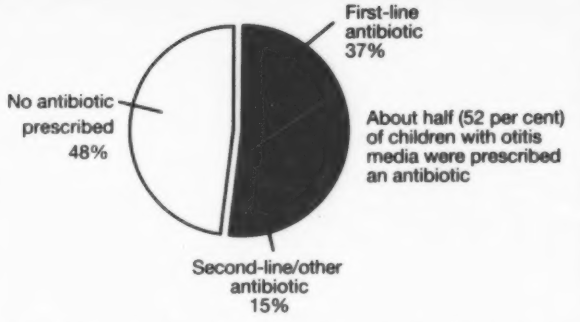
Otitis media, commonly called "ear infection," is one of the most common problems of infancy and early childhood. Otitis media is an inflammation of the middle ear. This causes pain and discomfort in children and anxiety in their parents. In some cases, otitis media can cause temporary hearing loss.

Although otitis media is extremely common, uncertainties persist about the most appropriate treatment. In most (60 to 90 per cent) cases, children's ear infections will get better on their own, whether one treats with antibiotics or not. This is because most ear infections are caused by viruses, and antibiotics are only effective against bacteria. Similarly, allergic congestion can mimic ear infection; allergic conditions do not respond to antibiotics.

In the 3-year period April 1998 and March 2001, almost one-third of Status Indian children visited a general practitioner because of otitis media. Of the 9,440 Status Indian children diagnosed with otitis media, about half (52 per cent) received a prescription for

Fig. 7.10

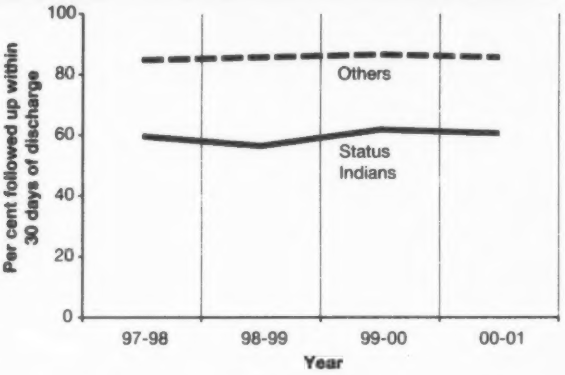
Antibiotic Prescribing for Children's Ear Infections, Status Indian Children Age 0-14, B.C., April 1998 to March 2001



Per cent of children age 0-14 diagnosed with otitis media (ICD-9 381-382) who received a prescription for antibiotics after visiting a general practioner and per cent for who received first-line (first choice) or second-line (alternative) treatment on their first prescription.
Source: Medical Services Plan and PharmaNet. Unpublished tables, June 2002.

Fig. 7.11

Community Follow-up after Hospitalization, Cases Age 15-64 Admitted to Hospital for Psychiatric Reasons, B.C., 1997-98 – 2000-01



Per cent of clients who received at least one follow-up contact at a community mental health centre or with a fee-for-service general practitioner or psychiatrist within 30 days of discharge from hospital with a mental health diagnosis (ICD-9 290-314, V61 or V62).
Sources: (1) Mental Health Data Warehouse, Morbidity Database (2) MSP Claims. Information Support, B.C. Ministry of Health Services. Unpublished tables, January 2002.
Note: Follow-up services funded in other ways, e.g., physician services funded through means other than the fee-for-service method, are not included in these statistics.

antibiotics. Amoxicillin, the first-line antibiotic recommended in treatment guidelines, was prescribed for most of these children, while others received second-line or other treatments on their first prescription (Figure 7.10).

Based on data for this 3-year period, antibiotic prescribing rates are very similar for Status Indian (52 per cent) and other children living in B.C. (53 per cent). The figure for B.C. overall is an improvement over 1996, when 58 per cent of children with otitis media were prescribed an antibiotic (Provincial Health Officer, 1998). This is an encouraging trend, because it is known that antibiotics have been over-used in the past. Because otitis media is thought to be more common and more severe among Aboriginal children, rates of disease and prescribing practices are indicators that should be monitored regularly for this population.

## Community Follow-up

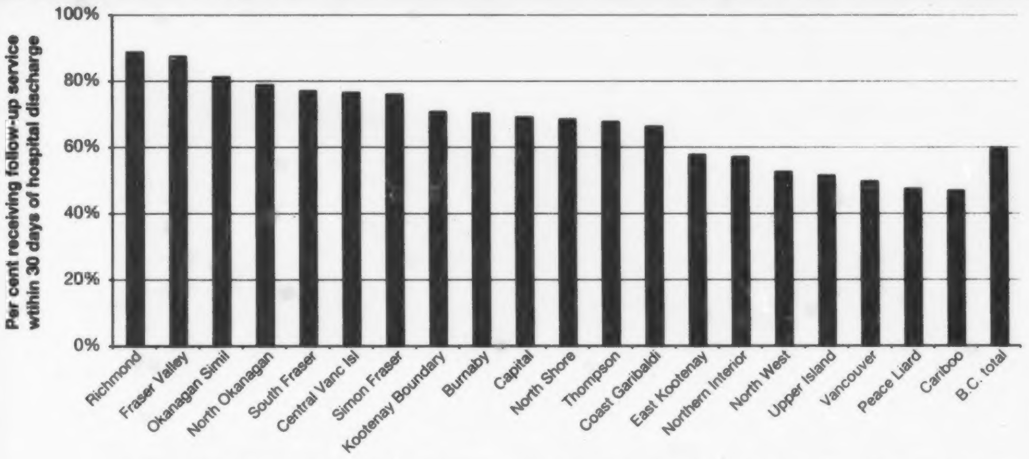
Sixty per cent of Status Indians who are hospitalized for psychiatric reasons make contact with the health care system once they are discharged. This indicates that a substantial minority (40 per cent) are not receiving the follow-up services they need to manage their mental health problems and to help prevent re-admission to hospital. The 60 per cent follow-up rate for Status Indians is lower than the rate of 85 per cent for other British Columbians (Figure 7.11).

Of the 4,284 Status Indian cases admitted to acute care hospitals with a mental health diagnosis over a 4-year period, 2,550 had contact with a community mental health centre or a fee-for-service physician within 30 days of discharge. Private physicians were the main point of contact – 48 per cent were seen by a fee-for-service general practitioner or psychiatrist, and 9 per cent were seen by both a private physician and a community health centre. Follow-up rates ranged from 47 per cent in the Cariboo to 89 per cent in Richmond (Figure 7.12).

A well-coordinated range of follow-up services is particularly important for mental health clients, because many mental illnesses are long-term and require specialized care and support. In a recent analysis of B.C. data, patients hospitalized for a mental illness in fiscal year 1997-98 were tracked through December 2000. Their death rate was almost 7 times that of other British Columbians during the same time period. Among those hospitalized for a mental illness, the death rate was well above the provincial average for both natural and external causes of death, with suicide and unintentional poisoning being the leading causes (Population Health Surveillance and Epidemiology, 2001). These data are not specific to Aboriginal patients, but since the post-hospitalization follow-up rate for Status Indian patients is less than for other B.C. patients, it would not be unreasonable to expect that this higher risk of death for all mental health clients may be even higher for Aboriginal clients.

Fig. 7.12

Community Follow-up after Hospitalization by Health Region: Status Indian Cases Age 15 - 64 Admitted to Hospital for Psychiatric Reasons, B.C. 1997-98 — 2000-01



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Note: Follow-up services funded in other ways, e.g., physician services funded through means other than the fee-for-service method, are not included in these statistics.

Low rates of follow-up can indicate a lack of community services to support those with mental illness, or that there are problems with coordination between hospitals and the community system. Mental health services, including the field of community psychiatry, do not always adequately or appropriately deal with the needs of Aboriginal people. To address these concerns, the Ministry of Health Services has provided funding to Health Authorities. Funding has gone towards developing Aboriginal Mental Health Liaison Workers so that they can provide liaison, support and linkages with the mental health community network. In addition, the Ministry will develop Best Practices in Aboriginal Mental Health. This initiative will take into consideration the diverse Aboriginal cultures within B.C. and is developed with help from experts in Aboriginal mental health. It will also focus on ensuring recovering patients receive appropriate and sufficient follow-up care by the community.

### "One Door" for Health and Social Services: The Prince George Native Friendship Centre

The Prince George Native Friendship Centre is a non-profit organization serving the needs of Aboriginal people who live in and around the city of Prince George, B.C. In spite of having multiple funders and reporting requirements, the Friendship Centre is able to provide "one door" for dealing with a range of health and social issues.

Established by a group of young Native people in 1969, the Centre has grown into a multi-faceted organization employing over 120 people and serving about 20,000 clients annually. The Centre's Gathering Place houses an employment unit, healing centre, art gallery, and social and educational programs. Several safe houses for youth at risk are also maintained.

The Native Healing Centre illustrates how the Friendship Centre has evolved to meet the needs of the community. The Healing Centre began in 1988 with one position for an alcohol and drug counselor. Today, a multidisciplinary team counsels individuals and families on abuses of all kinds - violence, sexual abuse, family breakdowns, child apprehensions, addictions, suicide, and mental illness. The effective use of complementary medicines is one of the Centre's keys to success. The Health Centre team can offer a Sweat Lodge ceremony, but they are also familiar with "mainstream" treatments for trauma and mental illness.

The Friendship Centre has partnerships with many local, provincial, and national agencies, as well as government ministries and departments.

More information about the Prince George Native Friendship Centre is available from their web site, http://www.pgnfc.com/index.asp

## Culturally-Appropriate Services

The mainstream health system has not always done a good job at meeting the needs of Aboriginal people, as documented in a number of reports. The B.C. Royal Commission on Health Care and Costs (1991) noted the need to address the lack of trust that Aboriginal people feel with the system. The Commission recommended greater involvement of Aboriginal people in the planning and delivery of programs and services, more health care training opportunities for Aboriginal people, and cross-cultural training for health staff. They also recommended programs to address specific health issues, including alcohol and drug abuse, mental health, abuse, sexually transmitted diseases, and HIV/AIDS.

### First Nations Health Careers Program

First Nations people are under-represented in the health care professions (see Figure 4.5, page 42). Because of this under-representation, the First Nations House of Learning and the Office of the Coordinator of Health Sciences at the University of British Columbia established the First Nations Health Careers Program in 1988, with funding from Health Canada. The program's main goal is to increase the number of First Nations health care professionals.

The program has successfully increased the number of First Nations students enrolled in health care professions. In 1988-89, only one First Nations person was enrolled at the University in a health field. Since then, enrolment has grown by at least 10 per cent each year. To date, approximately 100 First Nations health care professionals have graduated from the program. Fifty-seven people are currently enrolled, and three are expected to graduate this year.

The First Nations Health Careers Program recruits students directly by going to career fairs and attending conferences to promote the program. Posters have been developed using students as role models, and these are distributed at the career fairs and conferences and through direct mail-outs to band offices.

To help First Nations students adapt to University life, the program offers support services to ease the transition. The program creates cultural awareness among Aboriginal and non-Aboriginal health and human service students, staff and faculty, liaises with health and human service professional associations, and encourages high school students' interest in the health care professions.

Programs offered through the University include Audiology and Speech Sciences, Clinical Psychology, Counselling Psychology, Dentistry, Foods and Nutrition, Health Administration, Human Kinetics, Medicine, Nursing, Occupational Therapy and Physical Therapy, and Pharmacy.

For additional information about the First Nations Health Careers Program at UBC, visit their web site at http://www.health-sciences.ubc.ca/iah/divisions.html#fnhc

Cultural safety, input into health policy, and a social focus were some of the recommendations arising from interviews with Aboriginal women about their encounters with the mainstream health services on a small reserve community in B.C. Aboriginal patients felt their concerns were not taken seriously, that they were not listened to, that providers had negative stereotypes, and that they were "outside" the system, and that providers did not consider their personal circumstances (Browne, Fiske, & Thomas, 2000).

Similar issues were identified in forums held in Vancouver and Williams Lake. These gathered input on Aboriginal women and addictions/substance misuse issues. Lack of confidentiality and trust, jurisdictional issues, bureaucratic barriers, and lack of facilities for mothers and their children were some of the barriers women identified. A focus on wellness, reconnection with traditional methods, and more sensitivity toward people and their problems were some of the things that were suggested to improve service delivery (Report on the Action Forum, 2000).

Efforts are being made to improve services for Aboriginal people and to address some of these longstanding concerns. Some initiatives include Aboriginal-run clinics and services, efforts to encourage health profession uptake, and Aboriginal liaison programs.

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## Traditional Healing

Traditional medicine refers to health beliefs and practices of indigenous people before the development and expansion of western scientific medicine. There has been increasing interest in traditional healing methods and the possibility of establishing some sort of relationship within the medical system. New Zealand for example, has made significant efforts to incorporate traditional healing practices into health services for the Maori population. In Canada, the Royal Commission on Aboriginal Peoples called for a new role for traditional healing within a redesigned health system. The Yukon government, in its 1990 Health Act, includes a provision to recognize and respect Aboriginal traditional healing practices, and at least two provinces (Ontario, Alberta) have called for an increased role and sensitivity toward traditional healers (Carroll, 1999).

### Standards for Traditional Maori Healing

Healing circles, medicine walks, sweat lodges, and other traditional ways of dealing with illness are being discussed and debated world-wide.

The New Zealand government sees a place for traditional Maori healing practices, medicines, and remedies. Regional health authorities are able to provide traditional healing in conjunction with other primary health services, where there is reason to believe this will improve access to effective services for Maori people and lead to better health outcomes.

National standards for traditional Maori healing have been developed. These provide a guide for clinics wishing to implement traditional healing methods. Standards of practice, patient referrals, record keeping, patient rights and responsibilities, and medicine preparation and dispensing are some of the topics covered.

Standards for Traditional Maori Healing was developed by the New Zealand Ministry of Health, with support from the National Body of Traditional Maori Healers and the Health Funding Authority. The standards document is available from the Maori Health web site, http://www.maorihealth.govt.nz/pub/pub01/mh01.htm.

## What Targets Are Achievable?

As noted in Chapter 3, the province has set some targets for improved health status for Aboriginal peoples, as measured by infant mortality and life expectancy. These targets have been included in performance agreements between the Ministry of Health Services and local health authorities. Health authorities are expected to work toward achieving these provincial targets. As health authorities develop their individual service plans, there will be opportunities to include local performance measures and targets.

The Ministry of Health Services has established targets with regard to utilization of various health services (acute care, home and community care, mental health, waiting times for key services). One target is to improve continuity of care by 3 per cent per year, as measured by the proportion of people hospitalized for a mental health diagnosis who receive community or physician follow-up within 30 days of discharge. For the Status Indian population, this would mean a 3 per cent annual increase from the baseline of 60 per cent in 2000/01.

The Ministry of Health Planning intends to develop and implement access standards for selected services by March 2005 (B.C. Ministry of Health Planning, 2002).

There are national goals, objectives, and targets for immunization of infants and children. The national target is to have 97 per cent of children immunized against diphtheria, polio, tetanus

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Most dental disease in children is preventable. Because early diagnosis and prompt treatment can halt tooth destruction, a low rate of dental caries should be attainable.

The University of British Columbia has established a target to enroll Aboriginal students in 5 per cent of the seats in the undergraduate MD program, as of the 2002-03 academic year (UBC Faculty of Medicine, 2001).

## What Actions Can We Take?

First Nations communities can:

- Participate in health governance and planning structures.
- Become actively involved to increase the participation of Aboriginal women in prevention and screening programs, such as Pap tests and screening mammography.

The health system can:

- Work with the Aboriginal community to develop performance expectations for Aboriginal health. Include performance measures and targets in health authority service plans.
- Make a comprehensive effort to respond to mental health problems and trauma in Aboriginal communities.
- Help develop community capacity for providing non-medication therapies for pain, sleep, and anxiety disorders.
- Work with Aboriginal communities to increase the uptake of breast cancer screening and Pap tests by Aboriginal women.
- Initiate a program of pneumococcal vaccine for Aboriginal infants in January 2003.
- Make sure that programs to prevent early childhood caries are available to all Aboriginal children, regardless of where they live in the province.
- Encourage Aboriginal involvement in describing and capturing evidence about what works to promote health, treat illness, and care for the vulnerable. Support the use of traditional healing in conjunction with other primary health services, where there is reason to believe this will lead to better health outcomes.

The College of Physicians and Surgeons can:

- Continue to monitor professional prescribing practices for benzodiazepines and other psychotropic drugs and deal with those who are prescribing outside the norm.

Government can:

- Work from the principle that Aboriginal people, like all British Columbians, have the right to receive services that will help them achieve health. Jurisdictional issues – who pays? – should be transparent to consumers.
- Continue to work on plans for routine record linkage to identify Status Indian records in health databases, e.g., hospital morbidity, physician claims, mental health database, B.C. Cancer Registry, B.C. Centre for Disease Control.

# 8. Disease and Injury Prevention

*This chapter outlines some of the specific diseases that threaten Aboriginal health today, as well as strategies to prevent them. Topics include diabetes, arthritis, disabilities, HIV/AIDS, tuberculosis, and injuries.*

## Highlights

- Diabetes is a critical issue in Aboriginal communities. A major national initiative is underway to prevent the disease and to provide treatment and care.
- Nearly one-third of Aboriginal Canadians report having a disability, more than double the national rate. Yet, Aboriginal people obtain fewer support services from the formal health care system, based on B.C. data on home support services and long-term care facilities.
- Death rates due to HIV/AIDS are increasing among Status Indians, while rates in the general population are declining. This is one of the few causes of death where the health status gap is widening.
- Tuberculosis continues to be a health problem among the Aboriginal population, with rates about three times the provincial average. The national goal to eliminate tuberculosis in Aboriginal communities can be achieved, but this requires addressing problems that include inadequate housing, poor nutrition, substance abuse, and HIV.
- Injury death rates among Status Indians fell dramatically – more than 50 per cent – in the 1990s, and the gap between Status Indians and other British Columbians narrowed considerably. Mortality rates for suicide could converge within the next 5 years – 10 years for unintentional injuries – if these trends continue.
- Although death rates have fallen, injuries remain the most common cause of death among Status Indians, accounting for about one-quarter of all deaths and more than 40 per cent of Potential Years of Life Lost.
- Between 1,500 and 2,500 Aboriginal people in the Greater Vancouver area are injection drug users. Like HIV, tuberculosis, and many other health problems, injection drug use is a symptom of broader problems such as poverty and marginalization.

## Diabetes

Diabetes was virtually unknown 50 years ago in Aboriginal peoples. Today, diabetes has become one of the most common chronic illnesses experienced by the Aboriginal population. Background papers developed for the Aboriginal Diabetes Strategy summarize some of the knowledge about the epidemiology of diabetes in Canada (Health Canada, 1998; Health Canada, March 2001):

- Diabetes rates are high among Aboriginal people. The 1991 Aboriginal Peoples Survey found an age-adjusted prevalence of 9.9 per cent among Aboriginal people – more than three times the rate in the general population (3.1 per cent). Aboriginal diabetes rates are higher among all age categories, for both men and women.
- Diabetes is becoming more common. Surveys show that prevalence rates are rising in the Aboriginal population, and that diabetes is occurring in increasingly younger people. Manitoba has estimated that in 20 years, more than one-quarter of First Nations adults will have diabetes.
- Complication rates are high. Complications from diabetes are serious and include kidney disease, heart disease, blindness, and amputations. Aboriginal people have more complications, and they are more severe.
- Diabetes rates vary from community to community. Rates seem to vary according to language family and location, although studies are difficult to compare due to different methods. National surveys have found that Aboriginal diabetes rates are lowest in British Columbia and the northern territories, perhaps because these regions have had a shorter period of contact with European lifestyle.
- Children and women are groups needing special focus. Most Aboriginal people with diabetes have Type 2 diabetes. Although Type 2 diabetes is sometimes called "adult-onset" diabetes, it is being diagnosed in children as young as 5 to 8 years in northern Ontario and Manitoba. Women of childbearing age are also a concern, because of the risk of complications of diabetes during pregnancy.

In British Columbia, there has not been ongoing surveillance of diabetes. Recently, trends in diabetes-related hospitalization and deaths have been analyzed (Jin, Martin, & Sarin, in press). A diabetes database is currently being established in B.C. in conjunction with the National Diabetes Surveillance System. Rates of incidence (new cases), prevalence (number of people with diabetes at a specific point in time), and complications will be tracked, based on data from patients' contacts with the health care system. First results are expected in 2002, once a data sharing system is in place to allow identification of Status Indians in the database.

Why are diabetes rates so high among the Aboriginal population? Genetic susceptibility is thought to be a contributing factor, in combination with a rapid transition from a physically active lifestyle and traditional foods to a less active lifestyle and a diet high in fats, sugar, and salt. The "thrifty gene" theory, first postulated in the 1960s, suggests that Aboriginal people are biologically predisposed to store energy very efficiently, as a result of their ancestors' nomadic lifestyles and cycles of feast and famine (Neel, 1962). Most experts believe that genetics plays a part in the high prevalence of diabetes among Aboriginal people, although a specific gene (or combination of genes) responsible for diabetes has not been identified.

There is no cure for diabetes, but the disease can be prevented, or its onset delayed, through healthy eating, maintaining a healthy body weight, and increased physical activity. Children and youth are important groups to target for promotion of healthy eating and physically active lifestyles, in order to slow the numbers with diabetes in future generations. Screening, either focussing on high-risk communities or groups such as elders and pregnant women, can help detect diabetes and provide treatment at its earliest stages. Regular check-ups and examinations of the eyes, kidneys, and heart can help prevent blindness and other complications.

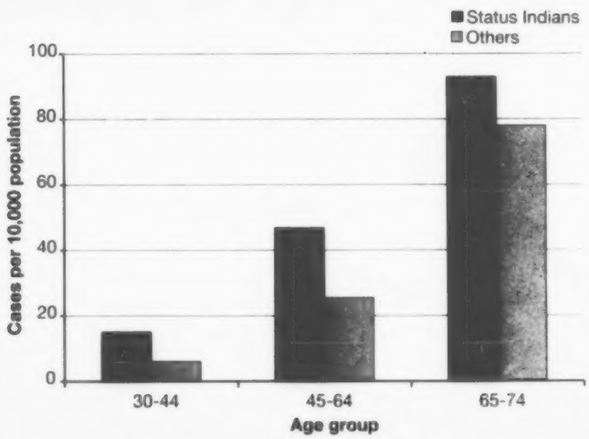
Most Aboriginal communities are aware that diabetes is a serious health issue, but it can be a challenge to tackle this growing problem when there are so many other pressing health and social concerns. An Aboriginal Diabetes Initiative was announced in 1999, under the umbrella of the Canadian Diabetes Strategy. With a national budget of $58 million over 5 years, the Aboriginal Diabetes Initiative is aimed at improving diabetes prevention and education, treatment and support, and surveillance for Aboriginal people, including Metis and both on and off reserve populations. In April 2002, a mobile diabetic retinopathy screening clinic began providing service to northern First Nations communities. This is a collaborative undertaking of the First Nations Chiefs' Health Committee, Health Canada, and the Department of Ophthalmology at the University of British Columbia.

## Arthritis

Surveys show that arthritis is more common among Aboriginal people. Seventeen per cent of First Nations adults in B.C. report suffering from this condition, compared to 5 per cent of the general population (these rates are age-adjusted to provide a more accurate comparison) (Martin & Jin, 2002). Hospital data also show a higher rate and, as expected, a rate that increases with age (Figure 8.1).

**Fig. 8.1**

Arthritis Hospitalizations, Status Indians and Other B.C. Residents, 1997-98 – 2000-01



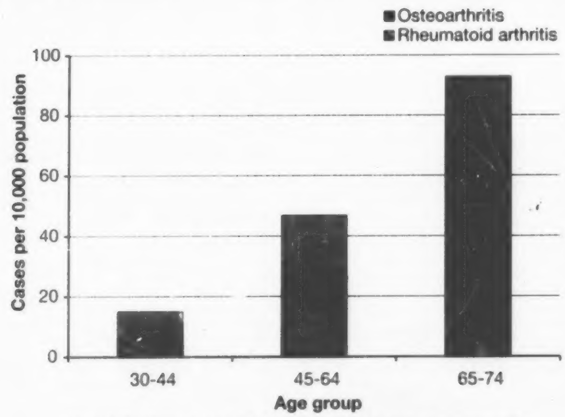
Hospitalizations due to osteoarthritis (ICD-9 715) and rheumatoid arthritis (ICD-9 714), annual average for 4-year period 1997-98 - 2000-01.
Source: Morbidity Database. Information Support, B.C. Ministry of Health Services, Project 2001-288.

The term arthritis refers to a variety of joint problems that cause pain, swelling, and stiffness. Very little is known about what causes most types of arthritis. Some types seem to be hereditary, others are related to imbalances in body chemistry, and some are due to problems in the immune system. The reasons for a higher prevalence among Aboriginal people are not known, but may relate to both genetic and environmental factors.

Certain forms of arthritis are more common among Aboriginal people, particularly in British Columbia. Ankylosing spondylitis is 10 times more frequent than in Caucasian populations (Gofton, Chalmers, Price, & Reeve, 1975). Rheumatoid arthritis, systemic lupus erythematosus (SLE), and

Fig. 8.2

Arthritis Hospitalizations, Status Indians, B.C., 1997-98 — 2000-01



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juvenile rheumatoid arthritis have also been studied. The incidence appears to be about the same, but these conditions are more severe in Aboriginal people, while SLE is more severe in both Aboriginal and Asian populations (A. Chalmers, personal communication, June 14, 2002).

In terms of hospitalizations, osteoarthritis cases exceed rheumatoid arthritis (Figure 8.2). Osteoarthritis, the most common type of arthritis, is associated with aging or "wear and tear". Most cases can be managed with home treatment. The inflammatory type of arthritis, called rheumatoid arthritis, has been the focus of more attention and improvements in therapy in recent years, and this has resulted in improved quality of life.

Hospital statistics do not provide a true reflection of the occurrence of arthritis, but only an indication of the number of cases severe enough to require hospital admission. It may not be possible to prevent arthritis, but the impact can be reduced by controlling body weight, getting regular exercise, and avoiding activities that repeatedly jar the body (running, knee-bending, etc.). Rehabilitation requires individual treatment, as well as changes such as the re-designing of homes, public buildings, and transportation systems to make it easier to participate in daily activities.

Many Aboriginal people live in remote areas that have minimal access to specialist care, except through traveling consultation services provided by the Mary Pack Arthritis Program, managed by the Vancouver Coastal Health Authority. Many Aboriginal communities have no direct access to physiotherapists, occupational therapists, social workers, and nurses to provide physical support, emotional support, and arthritis education. For example, two major Aboriginal communities – the Queen Charlotte Islands and North Vancouver Island – have had no physiotherapists for more than 5 years, no occupational therapist, and see a specialist twice per year for three days each. People requiring comprehensive rehabilitation, surgery, complex devices, and appliances need to be transferred – often at great expense – to central facilities in Vancouver or Victoria.

## Disabilities

Almost one-third of Aboriginal Canadians age 15 and over reported having a disability in 1991 – more than double the national rate (15 per cent). The difference was particularly pronounced among younger age groups, where Aboriginal people were three times as likely to have a disability (Figure 8.3).

## The BCANDS Resource Centre
### A Lending Centre for Health and Disability Information

**Aboriginal communities – and practitioners who work directly with Aboriginal people – need sound information about disabling conditions, their causes, prevention, and methods of treatment. The BCANDS Resource Centre helps to fill this need.**

**The Resource Centre lends out health information material, videos, kits, and books. Genetic illnesses and diseases, Fetal Alcohol Syndrome/Fetal Alcohol Effects, diabetes, arthritis, heart disease and stroke, and coping with loss are some of the topics included in the extensive reference collection. The Centre's resources relate to issues that are important to Aboriginal communities and are intended to help Aboriginal people with and without disabilities maintain and improve their health.**

**More than 850 front-line workers, caregivers, and Aboriginal people with disabilities use the Resource Centre each year. Nurses, teachers, community health nurses, and counselors are the most frequent users of the resources. Borrowers use the resources for their front-line work, classroom teaching, workshops, prenatal teaching, and other reference purposes.**

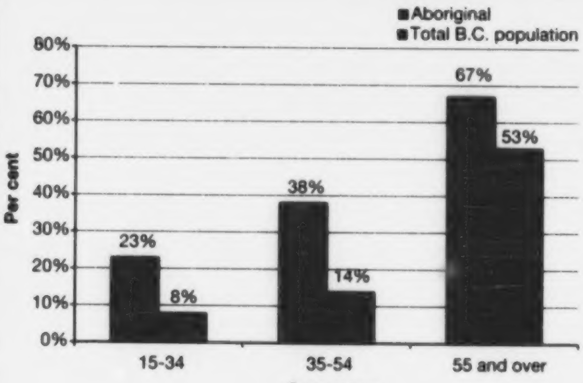
**With funding from Health Canada, the Resource Centre is operated by the B.C. Aboriginal Network on Disability Society (BCANDS), a non-profit organization that has been providing services and advocacy on behalf of Aboriginal people with disabilities since 1991. BCANDS has managed the Resource Centre since 1998, when responsibility was transferred from the Medical Services Branch of Health Canada. This was the first centre of its type to be transferred to a First Nations organization.**

**BCANDS has a membership of 2,700 people who receive the Voices and Visions Newsletter on a regular basis. In many cases, mostly in remote areas, this newsletter may be the only source of health information that members receive. BCANDS has identified early childhood development (including Fetal Alcohol Syndrome) as one of their priorities in their five-year plan.**

**The Resource Centre has an on-line catalogue, which is available at http://www.bcands.bc.ca/resctr.htm.**

Fig. 83

Prevalence of Disability, B.C. 1991



Source: Statistics Canada. Aboriginal Peoples Survey 1991 and Canada Census 1991.

The World Health Organization defines "disability" as any restriction or limitation in ability to perform activities considered normal for a human being, regardless of the cause. A person with a heart condition, a back problem, HIV/AIDS, or depression could each be "disabled" in terms of their ability to participate in the workforce and to live a full life in the community. People are not considered to have disability if they use a technical aid and that aid effectively eliminates the limitation. An individual who wears corrective lenses or who uses a hearing aid and who states that he/she has no limitation when using the aid would not be considered to have a disability. Given the higher rates of illnesses, injuries, and medical conditions among Aboriginal people, it is not surprising to find higher rates of disability in this population.

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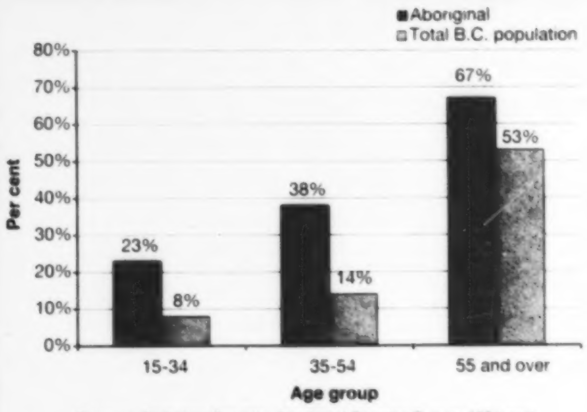

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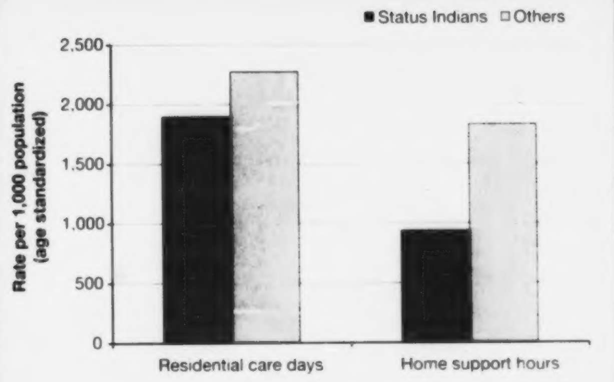
**Fig. 8.4**

**Use of Residential Care and Home Support Services, Status Indians and Other Residents of B.C., 1999-00**



Number of days spent in residential care facilities and number of hours of home support services received, as a rate per 1,000 population.
Source: Continuing Care Data Warehouse. Prepared by Information Support, B.C. Ministry of Health Services, project 2001-288.
Note: Support services provided by Band home workers are not included in these provincial statistics.

Some disabling conditions cannot be prevented, but usually the progression from disease or injury can be interrupted, so that disability can be postponed or minimized. When disability does occur, rehabilitation and support can help to improve quality of life for persons with chronic conditions and their caregivers. Home care services, mobility devices, medication awareness programs, physiotherapy, kidney dialysis services, and residential care facilities are some of the rehabilitation and support services that can help minimize the level of disability.

Aboriginal people are less likely to use the support services of the formal health care system, based on provincial statistics. Compared to other British Columbians, Status Indians in B.C. use roughly half as many home support hours, and they spend 20 per cent fewer days in residential care facilities (Figure 8.4). Aboriginal usage may be lower because services are not available in Aboriginal communities or due to preferences for receiving care in other ways. Many Aboriginal communities are located far from the large urban centres where specialized care services for people with disabilities and chronic conditions tend to be located. Even if services are available locally, Aboriginal people may choose to rely on family members for assistance. Jurisdictional issues can be another barrier to

### A'Qam Community Care Centre

**A'Qam Community Care Centre is a 16-bed on-reserve facility operated by the St. Mary's Indian Band in Cranbrook. It illustrates how funding partners can work together to provide culturally-appropriate residential care services.**

**The facility was built in 1995 and licensed for Intermediate Care. Financed exclusively through Indian and Northern Affairs Canada, the band-operated facility was unable to achieve sustainable occupancy due to federal admission requirements barring Aboriginal people who live off-reserve.**

**St. Mary's, the provincial Ministry of Health, and Indian and Northern Affairs negotiated an arrangement under which the province funds 5 beds as Aboriginal priority placements. Indian and Northern Affairs provides block funding for 8 beds, and St. Mary's is responsible for the remaining 3 beds.**

**The provincially-funded beds are governed by provincial guidelines and policies. An informal Aboriginal placement list is maintained regionally, with self-identified Aboriginal applicants having priority access. If there are no eligible Aboriginal people on the wait list, eligible non-Aboriginal people can have access. Occupants of the 8 federally-funded spaces must meet federal requirements.**

**The tri-partite agreement expires in 2002 and will be renewed.**

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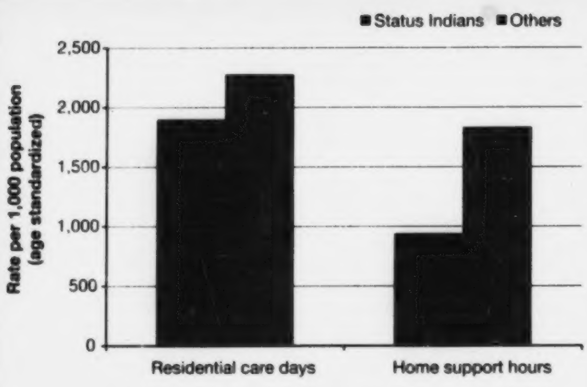

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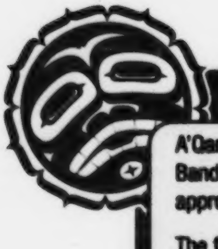

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accessing services. Aboriginal people are often told to "go to their band" for their special needs, and when they do, they are told to go back to provincial agencies (Gesinghaus, 2002). Incomplete data could be another reason that Aboriginal use of support services seems to be lower than average; home support services provided by Band workers are not captured in provincial information systems.

As the Aboriginal population ages, disabilities associated with chronic illness are going to become a major concern. Families are the front-line providers of care and support, but people need to have a range of services available. Planning for these needs is urgently required.

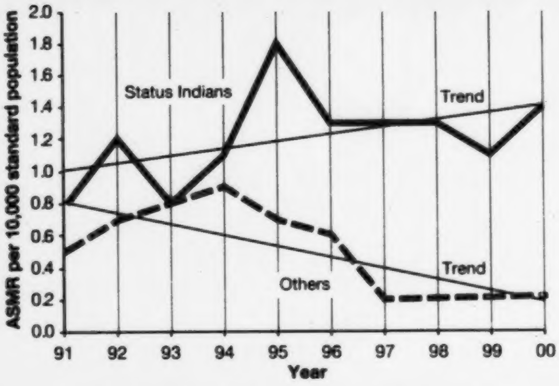
## HIV/AIDS

HIV/AIDS is a serious and pressing health issue affecting Aboriginal communities. Status Indian death rates due to HIV/AIDS are increasing, while rates among other British Columbians are declining (Figure 8.5). This is one of the few causes of death where rates are diverging.

Aboriginal people are disproportionately affected by many of the social and behavioural factors that increase their vulnerability to HIV infection. Thus, it is not surprising to find that the HIV/AIDS epidemic is affecting Aboriginal communities, particularly in inner city areas.

Fig. 8.5

HIV/AIDS Mortality Rates, Status Indians and Other Residents of B.C., 1991 - 2000



Age standardized mortality rate per 10,000 standard population (Canada 1991 Census).
Source: B.C. Vital Statistics Agency. Unpublished tables, June 2002.
Note: The downward trend for Others is statistically significant at the 5 per cent level.

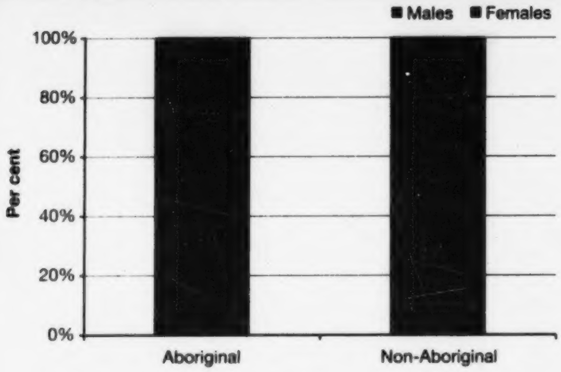
Aboriginal people comprise 16 per cent of those testing newly positive for HIV, while making up only 4 per cent of the B.C. population. Women account for about 43 per cent of new HIV cases among Aboriginals, compared to 18 per cent for non-Aboriginals (Figure 8.6). British Columbia has one of the best HIV data sets in Canada. Ethnicity is recorded for more than 90 per cent of new positive cases, and statistics are tabulated for First Nations, Inuit, and Métis. However, HIV statistics are based on people who come forward for testing, and may not reflect all those who have HIV.

Some of the factors that explain higher HIV/AIDS rates among Aboriginal people are:

- Higher rates of injection drug use.
- Higher rates of sexual activity among teens.
- Higher rates of sexually transmitted diseases (which make it easier to contract HIV) and co-existing illnesses such as hepatitis B and C, which complicate HIV care. Reported rates of sexually transmitted diseases among Aboriginal persons are 2 to 11 times the national average (Health Canada, Bureau of HIV/AIDS, STD and TB, March 2000).
- Higher rates of sex trade work and incarceration, where risk activities are high.

Fig. 8.6

Persons Testing Newly Positive for HIV by Gender, B.C. 1996 - 2001



Source: B.C. Centre for Disease Control Society. HIV/AIDS Update Annual 2001.
Note: "Aboriginal" includes First Nations, Inuit, and Métis. Cases of unknown ethnicity and/or unknown gender excluded.

- Concerns about confidentiality, especially in small communities, which may prevent some Aboriginal people from seeking HIV testing and treatment (Provincial Health Officer, February 2002).

British Columbia has one of the most comprehensive systems of HIV/AIDS-related programs in Canada, but improvements are possible, especially with regard to reaching vulnerable groups. The province is currently working on a new HIV/AIDS strategy that will guide B.C.'s response to the continuing HIV/AIDS epidemic. The strategy builds on and supports B.C.'s Aboriginal AIDS Strategy titled *The Red Road: Pathways to Wholeness* (B.C. Aboriginal HIV/AIDS Task Force, 1999). Three provincial organizations collaborate to provide HIV/AIDS education and services to Aboriginal communities within British Columbia: the Red Road HIV/AIDS Network, the Chee Mamuk Aboriginal Program located at the B.C. Centre for Disease Control, and Healing Our Spirit B.C. Aboriginal HIV/AIDS Society. Since 1990, Health Canada has funded on-reserve educational workshops, condom distribution, and support to Aboriginal HIV/AIDS organizations such as the Red Road and Healing Our Spirit. Health Canada, the Canadian Blood Services, and the First Nations Chiefs' Health Committee are currently conducting a 3-year HIV surveillance project directed at First Nations prenatal clients.

### Healing Our Spirit

**Healing Our Spirit B.C. Aboriginal HIV/AIDS Society, a non-profit organization, was established in 1992 to help raise the consciousness of Aboriginal people about the rapid spread of HIV/AIDS in their community. Since then, Healing Our Spirit has evolved into an HIV/AIDS service organization providing education, outreach, and advocacy services for Aboriginal people in British Columbia.**

**To educate people about HIV/AIDS, Healing Our Spirit has a Speakers' Bureau, conducts workshops for about 1,500 participants annually, and reaches about 5,000 people through the information booth program. Prevention workshops are designed for a cross-section of audiences – communities, schools, transition houses, prisons, women's groups, youth, elders, colleges and universities, powwows, and conferences. Annual HIV/AIDS conferences, organized by and for Aboriginal people, have been held in Vancouver, Prince George, Nanaimo, Cranbrook, and Prince Rupert. The 2002 conference was hosted in Kamloops.**

**An outreach program provides care, treatment, and support services for clients living with HIV/AIDS and their families. About 1,200 client drop-in visits are made to the outreach office in Vancouver each year. Services available include medical transportation, nutritional supplements, home and hospital visits, peer support, counseling, street outreach, and housing subsidies and advocacy.**

**Healing Our Spirit's philosophy is that everyone is part of the traditional healing circle, including people with HIV/AIDS. The medicine wheel is used as a tool to address prejudice and to encourage the integration of Aboriginal people with HIV/AIDS into their communities. Programs have evolved over the years to address the contributing factors that place Aboriginal people at higher risk, such as sexual abuse, homophobia, residential school experiences, lack of housing, and addictions.**

**More information about Healing Our Spirit is available from their web site, http://www.healingourspirit.org.**

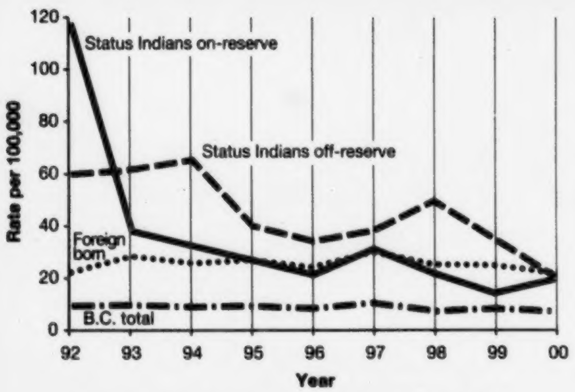
## Tuberculosis

Tuberculosis continues to be a health problem among the Aboriginal population. The levels of illness and death have declined dramatically in the 20th century, but the factors that contribute to this disease persist. These include poverty and substandard housing, which facilitate the spread of tuberculosis, as well as delays in detection and treatment of active cases and inadequately treated cases.

In British Columbia, foreign-born immigrants account for almost 70 per cent of tuberculosis cases – 204 of the 290 cases in 2000. However, the Aboriginal population remains a major risk group. Twenty-two Status Indian cases were reported in 2000, a rate of 20 per 100,000 population. This is about three times the provincial rate and about the same as the rate among foreign-born immigrants (Figure 8.7). Most of the Status Indian "off-reserve" cases live in Downtown Eastside Vancouver, which has the highest level of tuberculosis in B.C.

Fig. 8.7

Tuberculosis Rates, B.C. 1992 - 2000



Source: Division of Tuberculosis Control, B.C. Centre for Disease Control. Unpublished tables, March 2002.

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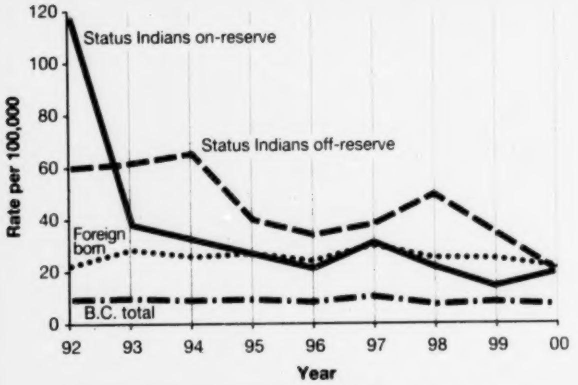
More information about Healing Our Spirit is available from their web site, http://www.healingourspirit.org.

## Tuberculosis

Tuberculosis continues to be a health problem among the Aboriginal population. The levels of illness and death have declined dramatically in the 20th century, but the factors that contribute to this disease persist. These include poverty and substandard housing, which facilitate the spread of tuberculosis, as well as delays in detection and treatment of active cases and inadequately treated cases.

In British Columbia, foreign-born immigrants account for almost 70 per cent of tuberculosis cases – 204 of the 290 cases in 2000. However, the Aboriginal population remains a major risk group. Twenty-two Status Indian cases were reported in 2000, a rate of 20 per 100,000 population. This is about three times the provincial rate and about the same as the rate among foreign-born immigrants (Figure 8.7). Most of the Status Indian "off-reserve" cases live in Downtown Eastside Vancouver, which has the highest level of tuberculosis in B.C.

**Fig. 8.7** Tuberculosis Rates, B.C., 1992 - 2000



Source: Division of Tuberculosis Control, B.C. Centre for Disease Control. Unpublished tables, March 2002.

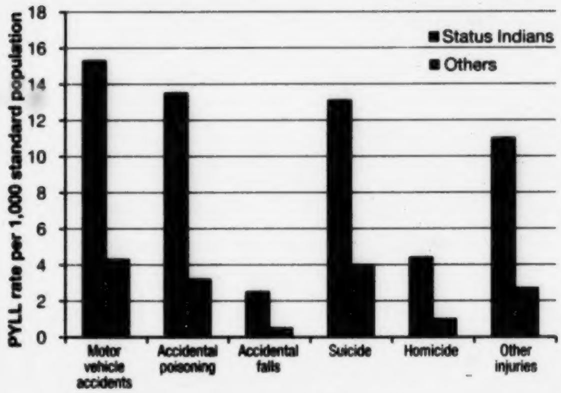
Because of consistently higher rates among the Aboriginal population, public health experts recognized the need to step up efforts to prevent and control this disease. Health Canada and the Assembly of First Nations worked together to develop a strategy for tuberculosis elimination in First Nations communities. The result, published in 1992, was the *National Tuberculosis Elimination Strategy for Aboriginal Peoples of Canada.* A goal was set to eliminate tuberculosis (reduce incidence to 1 per million population) in Aboriginal communities by the year 2010, with an average annual decrease of 15 per cent. Elements of the strategy were case finding, contact tracing, surveillance, BCG immunization of infants and children in high-rate communities, health education and training, and research.

The target to reduce tuberculosis by 15 per cent per year turned out to be overly ambitious, although some aspects of the Strategy were accomplished (Health Canada, Medical Services Branch, January 1999). The elimination of tuberculosis can still be achieved, but this requires ongoing, dedicated efforts.

Inadequate housing, poor nutrition, and substance abuse make people more susceptible to tuberculosis. If these problems could be solved, health status would improve, with a subsequent reduction in the occurrence of tuberculosis and other infectious diseases. Another challenge is the problem of HIV – a major risk factor for development of tuberculosis. Unless HIV infection can be controlled, the number of tuberculosis cases will be on the rise.

In British Columbia, regional health authorities, in conjunction with the B.C. Centre for Disease Control, provide a province-wide tuberculosis control program, which is closely linked to the federal program for First Nations on reserve. Vancouver Coastal Health Authority has developed an enhanced program, scheduled to begin in the Fall of 2002, to deal with the serious, longstanding issue of tuberculosis in Downtown Eastside Vancouver. The program involves finding and treating, on an annual basis, an estimated 250 people in the Downtown Eastside who have latent tuberculosis.

**Fig. 8.8** Potential Years of Life Lost due to Injuries, Status Indians and Other Residents of B.C., 1991 - 2000



Potential Years of Life Lost (age under 75 years) rate per 1,000 standard population (Canada 1991 Census).
Source: B.C. Vital Statistics Agency. Unpublished tables, June 2002.

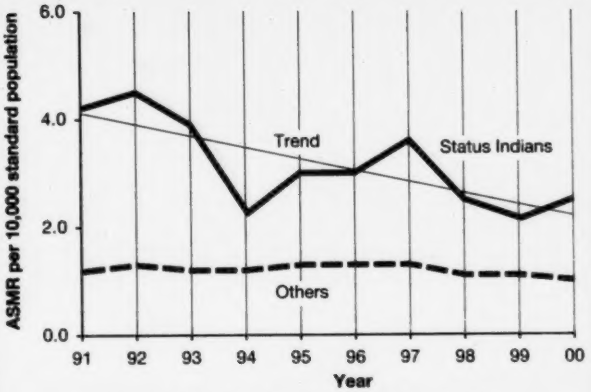
## Injuries

There have been major improvements in injury rates among Aboriginal people. The injury death rate was 11.3 per 10,000 in 2000 – less than half of what it was in 1991 (24.0). However, deaths remain high relative to the general B.C. population.

Injuries are often classified into two major categories. Unintentional injuries are those due to motor vehicle crashes, falls, drowning, burns, poisoning, or other "accidental" causes. Intentional injuries, in contrast, are those which are either self-inflicted (suicide) or caused by someone else (homicide or assault).

**Fig. 8.9**

**Suicide Death Rates, Status Indians and Other Residents of B.C., 1991 - 2000**



Age standardized mortality rate per 10,000 standard population (Canada 1991 Census).
Source: B.C. Vital Statistics Agency. Unpublished tables, June 2002.
Note: The downward trend for Status Indians is statistically significant at the 5 per cent level.

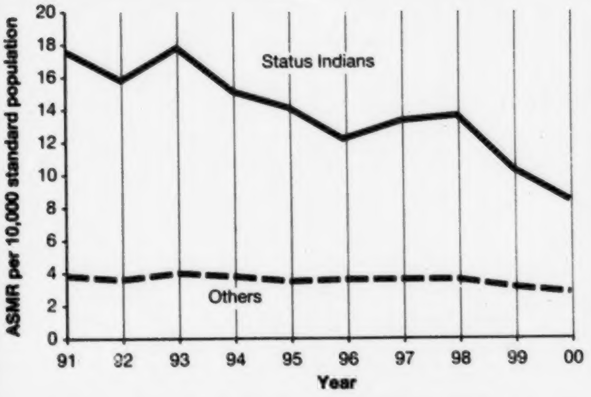
Among Aboriginal people, injuries account for more than one-quarter of all deaths and more than 40 per cent of Potential Years of Life Lost. The Aboriginal population has injury patterns that are similar to those of the total B.C. population, except with higher rates (Figure 8.8). Motor vehicle crashes are the leading cause of injury death, despite improvements over time. Accidental poisoning (which includes drug overdose deaths), suicide, falls, fires, and drowning are other leading causes. (See Figure 5.14 for deaths due to alcohol-related accidents and violence.)

During the 1990s, injury deaths – especially motor vehicle crashes, fire and flames, and suicide – showed statistically significant declines. The gap between Status Indians and other British Columbians has been narrowing (Figures 8.9 and 8.10). At current rates of improvement, mortality rates for suicide could converge within the next 5 years, 10 years for unintentional injuries – or sooner, if we challenge ourselves to work intensively and more strategically than we are currently doing.

Road conditions, behaviours regarding alcohol and seatbelt use, enforcement of traffic laws, and access to emergency care are some of the factors that can be changed to reduce motor vehicle injuries. House fire deaths can be reduced through improvements to housing conditions, smoking habits, and fire protection services and the use of smoke detectors. Use of personal floatation devices and avoidance of alcohol while on or near the water would prevent most drownings. In the Aboriginal population, the highest suicide rates are among youth age 15-24. There are some Aboriginal communities that have had no youth suicides in recent years (see Community Control, Chapter 4 and Lalonde, 2001). Generic skill-building, peer helping, youth participation, suicide awareness education, and school and community gatekeeper training are some interventions for reducing youth suicide (White & Jodoin, 1998; Hinbest, 2001).

**Fig. 8.10**

**Unintentional Injury Death Rates, Status Indians and Other Residents of B.C., 1991 - 2000**



Age standardized mortality rate per 10,000 standard population (Canada 1991 Census).
Source: B.C. Vital Statistics Agency. Unpublished tables, June 2002.

Aboriginal people have identified injury prevention as an important issue. A survey is being carried out on injury prevention in First National communities of B.C. The survey is being funded by the First Nations and Inuit Health Branch, Health Canada. Results will be available later this year from the First Nations and Inuit Health Branch.

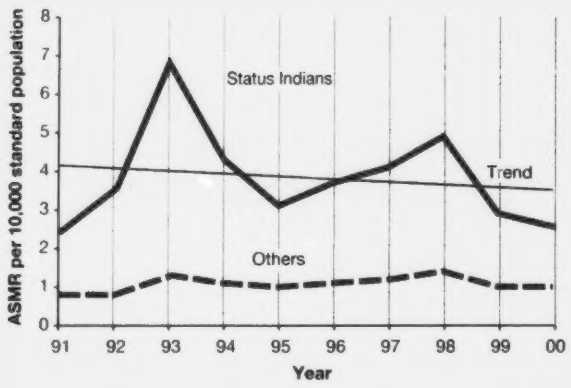
## Illicit Drug Deaths

Statistics on drug-induced deaths, which include drug dependence, accidental drug overdose deaths, and drug-induced suicides, are reported annually by the B.C.Vital Statistics Agency. These show a continuing higher rate among the Status Indian population – about three times as high as for other residents of B.C. (Figure 8.11).

The B.C. Coroners Service collects more detailed information about each case, although the designation of "Native" on their files may not always be complete. In Coroners' statistics, deaths due to illicit drug overdose showed an average of 23 Native deaths per year over the 7-year period 1994-2000. The typical case was a male in his 30s, living in Vancouver, who died while using heroin in combination with cocaine, alcohol, or other drugs. A significant number of the Native deaths – 41 per cent – were women, compared to 14 per cent of the non-Native deaths (Figure 8.12).

**Fig. 8.11**

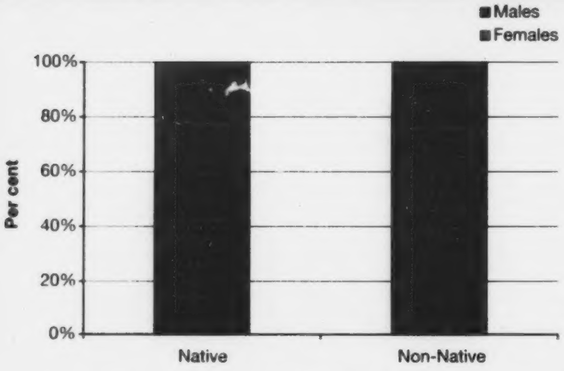
Drug-Induced Deaths, Status Indians and Other Residents of B.C. 1991 - 2000



Age standardized mortality rate per 10,000 standard population (Canada 1991 Census).
Source: B.C. Vital Statistics Agency. Unpublished tables, June 2002.

**Fig. 8.12**

Illicit Drug Overdose Deaths by Gender, B.C. 1994 - 2000



Deaths due to or as a consequence of an illicit drug overdose, as determined by the BC Coroners Service. A notation of Native is made by the coroner when the family indicates that the deceased is of Aboriginal origin or the coroner has some other indicators. Figures are thought to be under-estimated, as there may be cases where native status is not known.
Source: B.C. Coroners Service. Unpublished tables, May 7, 2001.

Overdose deaths are the final manifestation of the harm that can result from illicit drug use. There are between 1,500 and 2,500 Aboriginal injection drugs users in the Greater Vancouver area, based on estimates from needles exchange and other programs (Centre for Health Evaluation & Outcome Sciences, 2001). The reasons for using injection drugs are varied. Most injection drug users have histories of physical, emotional, or sexual abuse, poverty, family breakdown, and/or other addictions. Often, injection drug users have an associated mental illness.

Injection drug users, regardless of ethnicity, are at increased risk of infectious diseases, either through needle-sharing or as a result of living conditions associated with drug dependence. A recent survey of 322 Aboriginal injection drug users living in Greater Vancouver found a high prevalence of HIV, hepatitis C, and tuberculosis (29 per cent, 94 per cent, and 42 per cent, respectively) – rates that are higher than among the non-Aboriginal population who use injection drugs (Centre for Health Evaluation & Outcome Sciences, 2001).

Drug dependence is a medical condition. Making proven treatments available to injection drug users can help them recover from or reduce the harms resulting from their addiction. Mental health services, housing and social support, methadone therapy, and needle-exchange programs are examples of "harm reduction" strategies. National task forces have recommended scientific trials of heroin prescription and supervised injection sites.

## What Targets Are Achievable?

Rates of diabetes and its complications can be reduced through healthy nutrition, reduced obesity, increased physical activity, screening, and treatment. Once data are available from the B.C. diabetes database (some time in 2002), it will be possible to set specific targets for reduction.

The B.C. Centre for Disease Control is developing provincial objectives and targets for the prevention and control of communicable diseases. One objective under consideration is to achieve specific rate reductions in HIV (0 per cent increase), chlamydia (reduce annual increase in cases to 10 per cent), gonorrhea (5 per cent decrease), and acute hepatitis B (5 per cent decrease). These would be achieved by targeting Aboriginal populations and other high-risk groups (B.C. Centre for Disease Control, March 2002). It should soon be possible to set specific targets for disease reduction in the Status Indian population, now that a data-sharing agreement is in place (see Pap Tests, Chapter 7).

There is a national goal to eliminate tuberculosis (a disease incidence of less than 1 case per 1,000,000 population) in First Nations communities by the year 2010. This goal was set in 1992 in the *National Tuberculosis Strategy for Aboriginal Peoples in Canada*, developed collaboratively by Health Canada and the Assembly of First Nations (http://www.hc-sc.gc.ca/fnihb-dgspni/fnihb/chp/tuberculosis/index.htm). Provincial objectives for British Columbia are under development (B.C. Centre for Disease Control, March 2002). These are currently focussed on identification and treatment of new immigrants to B.C., as foreign-born immigrants account for almost 70 per cent of new tuberculosis cases.

Almost all injuries can be prevented. In 1997, the Minister of Health's Injury Prevention Advisory Committee established goals and targets for reducing injury in the birth to 24 age group (a 10 to 20 per cent reduction, depending on the type of injury). Since the baseline years (1990-1994), injury deaths and hospitalizations have continued to decline, and the year 2001 targets have already been met. A similar approach could be used to set targets for reducing injury deaths in the Aboriginal population. Based on trends in the 1990s, a 50 per cent reduction from the 1991-1999 average should be achievable by 2005. Alternatively, a target could be set for eliminating the gap between Status Indians and other British Columbians. If trends from the 1990s continue, rates will converge within the next 5 years for suicide/homicide and within the next ten years for unintentional injuries. In terms of benchmarks, the North West region has the lowest Status Indian injury death rate (11 per 10,000 for the period 1991-1999).

## What Actions Can We Take?

The health and social services systems can:

- Plan for services to assist Aboriginal people with chronic illnesses and disability-related activity limitations.
- Work with communities to develop prevention programs for diabetes, to complement efforts at following diabetics to improve treatment outcomes.
- Continue to improve data collection systems, in order to get comparative regional data about the occurrence of diabetes, arthritis, and other chronic conditions in the Aboriginal population.
- Expand arthritis services to include all health professionals important in arthritis care, e.g., physiotherapists, occupational therapists, to those areas of the province where care is not available.
- Develop a priority system for surgical intervention for Aboriginal people with severe arthritis who otherwise may have to wait for long periods.
- In consultation with Aboriginal communities, develop and deliver education programs to heighten awareness of arthritis, osteoporosis, exercise, weight control, and injury prevention.
- Focus on underlying factors that lead to illness, such as poverty, family distress, child abuse, inadequate housing, and untreated mental illness.
- Increase awareness and promotion of HIV treatment options and the potential benefits of starting treatment early.
- Collaborate with Aboriginal groups to review injury data and develop local strategies to reduce injuries in each community.
- Improve surveillance of injuries at emergency departments.
- Continue to develop a coordinated response to the health and social problems faced by injection drug users.

# 9. Recommended Actions

*This chapter makes 6 general recommendations, identifies 8 specific areas for health authority action, and proposes some suggested targets for improving the health of Aboriginal people in British Columbia.*

## General Recommendations

What do we need to do to hasten the pace of improvements in the health and well-being of Aboriginal peoples? As in other reports from the Provincial Health Officer, we must conclude that simply providing more money or more hospitals is not the answer. For one thing, Aboriginal health status seems to be highest in the northern areas of the province, where income levels are lower and formal health care services are less available. The lowest Aboriginal health status is found in Vancouver, where major hospitals and other services are more plentiful. Furthermore, the data show that Status Indians are using the health care system at rates equal to or greater than the average British Columbian, at least in terms of physician visits and admissions to hospital.

Many Aboriginal organizations provided input throughout the development of this report. Formal commitments, more recognition, a more holistic approach, more autonomy, and more representation were solutions suggested during the Provincial Health Officer's consultations. B.C. data and evidence from other jurisdictions support those six approaches. General recommendations from this report are as follows:

Formal commitments

- Establish provincial and regional targets for achieving comparable health status between the Aboriginal population and other British Columbians or specific Aboriginal targets, where appropriate. Hold ministries and health authorities accountable for progress toward those targets and for coordination with agencies that serve the same populations.

Improved standard of living

- Work collaboratively to improve housing conditions and economic and educational opportunities for Aboriginal people.

More recognition and respect

- Increase awareness of the health status of Aboriginal people and the health issues and challenges that Aboriginal people face.

More holistic approach

- Pay more attention to the non-medical, cultural, and spiritual determinants of health.
- Encourage participatory research to gain a clearer understanding as to why some Aboriginal communities are "healthier" than others.
- Identify and collect indicators that are meaningful and useful to Aboriginal communities. Perceived progress in a return to traditional ways, personal commitment to healing, housing quality, and employment opportunities are some examples from the B.C. First Nations Regional Health Survey that could be used as a starting point.

More autonomy

- Support efforts by Aboriginal people to achieve self-determination and a collective sense of control over their futures, in both on- and off-reserve communities.

More representation

- Encourage greater Aboriginal participation in health governance and in the design and delivery of culturally-appropriate health services.

## Specific Areas for Health Authority Action

This report provides more than 40 examples of actions that can be taken to make continued improvements in the health of Aboriginal people in British Columbia. In the Provincial Health Officer's view, there are eight areas where the greatest health gains can be made. This can be done by targeting strategic initiatives and building on the gradual improvements in Aboriginal health over the past decades.

- Early childhood development. SIDS rates showed a steep decline during the 1990s, especially among Status Indian babies. As a result, Status Indian infant mortality rates have nearly reached the low rate experienced by the general population. This represents a major achievement. These improvements can be sustained, in part, by reducing exposure to tobacco smoke, continuing to provide SIDS prevention activities, introducing a pneumococcal vaccine program, and improvements to primary care. At the same time, efforts should be directed to the promotion of healthy growth and development during early childhood – the period from birth through age 5.
- Tobacco. Smoking rates are high (45 per cent) among the Aboriginal population – about twice the rate in the general population (23 per cent). Major efforts are under way to reduce the use of tobacco in British Columbia. Education programs, cessation services, and community awareness activities aimed at Aboriginal youth and families should assist Aboriginal communities to bring down their high rates of smoking and smoking-related illnesses.

- Alcohol and drugs. Alcohol and illicit drugs continue to take a huge toll on the lives and health of the Aboriginal population, in spite of resources being devoted to these problem areas. Like other high-risk behaviours, alcohol and drug misuse reflects social and cultural stresses, which impact people's ability to cope with life in healthy ways. Alcohol and drug problems can be solved through comprehensive efforts to prevent and treat substance abuse and to reduce the harms they cause. British Columbia should boost and enhance community programs such as the Four Pillars Approach in Vancouver, with a focus on culture-based services specific to the Aboriginal population.
- HIV. Death rates due to HIV/AIDS are increasing among Status Indians, while rates in the general population are declining. This is one of the few causes of death where the health status gap is widening. British Columbia has one of the most comprehensive HIV/AIDS programs in Canada, but improvements are possible when it comes to reaching the Aboriginal population and other vulnerable groups. *The Red Road*, an Aboriginal strategy for HIV and AIDS in B.C., made 50 recommendations to address Aboriginal HIV/AIDS. The response to these recommendations should be strengthened and implemented.
- Diabetes. Diabetes is a critical issue in Aboriginal communities. A national Aboriginal Diabetes Initiative is under way to prevent diabetes and to manage the disease better through improvements to treatment and care. Diabetes can be prevented, or its onset delayed, through healthy eating, maintaining a healthy body weight, and increased physical activity. Children and youth are important groups to target for promotion of healthy eating and physically active lifestyles, in order to slow the numbers with diabetes in future generations.
- Injuries. Injuries are the most common cause of death for Aboriginal people. Injury death rates among Status Indians fell dramatically – more than 50 per cent – in the 1990s. However, death rates from injuries remain high, accounting for more than one-quarter of all Status Indian deaths and more than 40 per cent of Potential Years of Life Lost. Motor vehicle crashes, accidental poisoning (which includes drug overdose deaths), suicide, falls, fires, and drowning are the leading causes of injury death. Almost all injuries are preventable. As an example, road conditions, behaviours regarding alcohol and seatbelt use, enforcement of speeding and traffic laws, and access to emergency care are some of the factors that can be changed to reduce motor vehicle injuries. Injury prevention plans can be developed to address these factors at the community level.
- Primary care. Most (83 per cent) Status Indians visit a doctor or other health practitioner in a given year, compared to 87 per cent for the rest of the population. Available data provide a glimpse at overall utilization, but they do not tell us whether Aboriginal people are receiving the services they need. British Columbia needs better information about the quality and outcomes of health services provided, so that equity in outcomes can be targeted. The province should also seek better information about Aboriginal peoples' preferences for home and residential care. Universities and colleges are striving to increase the number of Aboriginal students enrolled in the health care professions, and these efforts should be encouraged.

- Information. Without the ability to measure, we cannot be sure that things are getting better. Currently there is a patchwork of information. We know the most about the Status Indian population – roughly two-thirds of the Aboriginal population. Birth and death-related statistics in this report are for Status Indians on and off-reserve combined. A project is under way to separate on and off-reserve statistics, so that in the future we will be able to report in this way. We know much less about non-status First Nations, Métis people, and Aboriginal people living in urban areas. Health authorities should consult with Aboriginal groups to determine how to record information about the Aboriginal population in health databases, so that information is complete, comparable, and useful for planning purposes. One approach would be to record Aboriginal identity or ancestry (similar to the Census questions) on all health records.

## Targets

What targets are achievable? The Provincial Health Officer proposes that we challenge ourselves to work on health inequities faster and more strategically than we are currently doing. Each health authority will need to set their own regional targets, depending on local needs and priorities. Some suggested provincial-level targets for improving Aboriginal health are as follows:

- Achieve and maintain infant mortality in the Status Indian population at a rate equal to the general population by 2005.
- Develop measures of success for early childhood growth and development by 2005.
- Increase immunization rates among two-year-old children to 85 per cent by 2005.
- Reduce Aboriginal smoking rates by one per cent per year in order to lower the current smoking rate of 45 per cent.
- Reduce Status Indian death rates due to HIV/AIDS to the 1991-2000 average rate of 1.2 per 10,000 by 2005, effectively halting the worsening trend (the 2000 rate was 1.4 per 10,000).
- Reduce the Status Indian injury death rate 50 per cent from the 1991-2000 baseline (17.7 per 10,000) by 2005.
- Improve Aboriginal women's Pap smear and screening mammography participation to a rate equal to other B.C. women (specific targets to be set once information systems are in place to allow improvements to be tracked).
- Decrease Status Indian preventable admissions to hospital 25 per cent from the 1987-2000 baseline (12.3 cases per 1,000) by 2005. (Preventable admissions include diabetes, asthma, hypertension, neurosis, depression, and abuse of alcohol or other drugs – conditions that can usually be managed in the community without the need for hospital admission).
- Improve continuity of care for mental health patients by 3 per cent per year (from the baseline of 60 per cent in 2000-01), as measured by the proportion of Status Indian population hospitalized for a mental health diagnosis who receive community follow-up within 30 days of discharge.

# Appendix A • Acknowledgments

The Provincial Health Officer, Dr. Perry Kendall acknowledges the significant contributions of Cathy Hull, Managing Editor to the Provincial Health Officer's reports since August 1997 until her recent retirement in June 2002. Cathy's work has assisted the Provincial Health Officer to produce high quality reports with clear language, excellent data and evidence based recommendations. These reports could not have been written without her.

Dr. Kendall is also grateful to the many individuals and groups who contributed to the preparation of this report. The Provincial Aboriginal Health Services Strategy (PAHSS) Steering Committee assisted in defining the report's content and overall approach. The PAHSS Committee, other Aboriginal groups and organizations, and other reviewers provided comments and suggestions on drafts at various stages. Many individuals and organizations provided data and technical support.

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# Appendix C
# Indicator Definitions and Data Sources

## Indicators of Aboriginal Health and Well-Being

### Health Status

| Well-Being | General Health | Health Conditions | Deaths |
|---|---|---|---|
| • Progress in community wellness | • Self-rated health<br>• Life expectancy* | • Chronic conditions | • Infant mortality*<br>• Potential Years of Life Lost (PYLL)*<br>• Mortality rate* |

### Community Environments

| Employment | Income | Educational Attainment | Participation and Social Integration |
|---|---|---|---|
| • Employment rate*<br>• Employment to population ratio* | • Average employment income*<br>• Income self-sufficiency*<br>• Children in low-income families* | • High school graduation*<br>• Post-secondary graduation* | • Disparity in socio-economic conditions between Aboriginal and non-Aboriginal population*<br>• Community control<br>• Children in care*<br>• Youth in justice institutions |

### Healthy Growth and Development

| Healthy Child Development | Learning Opportunities | Healthy Choices | Healthy Connections |
|---|---|---|---|
| • Low birthweight*<br>• Pre-term births*<br>• Post neonatal mortality*<br>• Teen pregnancy rate* | • School completion rate<br>• Foundation Skills Assessment scores<br>• Average GPA | • Smoking rate<br>• Binge drinking | • Family connectedness<br>• School connectedness |

### Physical Environment

| Housing and Infrastructure | Air | Water | Environmental Change |
|---|---|---|---|
| • Housing quality*<br>• Housing need<br>• Community services | • Exposure to second-hand smoke | • Drinking water quality* | • Mercury levels<br>• Perceived progress in relationship with the land |

### Health Services

| Accessibility | Doing the Right Things Right | Culturally-Appropriate Services |
|---|---|---|
| • Childhood immunization<br>• Pap smears<br>• Screening mammography*<br>• Use of Medical Services Plan, hospital, residential care, and home support services* | • Preventable admissions*<br>• Children's dental procedures*<br>• Prescriptions for tranquilizers/ sleeping pills and anti-depressants<br>• Antibiotic prescribing<br>• Community follow-up after hospitalization* | • Aboriginal representation in health professions |

### Disease and Injury Prevention

| Non-Communicable Disease | Communicable Disease | Injuries |
|---|---|---|
| • Diabetes<br>• Arthritis prevalence/hospitalizations<br>• Disability rate<br>• Smoking-attributable deaths*<br>• Alcohol-related deaths* | • HIV/AIDS deaths*<br>• Tuberculosis rate | • Unintentional injury deaths*<br>• Suicide deaths*<br>• Illicit drug deaths* |

* Regional data are provided in Appendix E

## Health Status

### Progress in community wellness

Definition: Proportion of the population who say there has been "good progress," "some progress," or "no progress" in the past two years in various aspects of community wellness. Wellness factors include return to traditional ways, First Nations' control of community programs, personal commitment to healing, renewed relationship with the land, networking among communities, use of traditional language, reduction in alcohol and drug abuse, availability of First Nations health professionals, employment opportunities, education and training opportunities, housing quality, and water and sewage facilities.

Source: First Nations and Inuit Regional Health Survey. For the survey questionnaire, see *First Nations and Inuit Regional Health Survey. National Report 1999.* http://www.afn.ca/Programs/Health%20Secretariat/PDF's/title.pdf

Rationale: These survey questions assess people's perceptions of progress related to community wellness. The factors assessed were identified by the survey steering committee as having implications for a holistic view of community wellness and community ability to respond to crisis.

### Self-Rated Health

Definition: Proportion of the population who rate their own health status as "excellent," "very good," "good," "fair," or "poor".

Sources: First Nations and Inuit Regional Health Survey.
Aboriginal Peoples Survey.
Adolescent Health Survey.
National Population Health Survey, Statistics Canada.

Rationale: People's perceptions of their own health provide an overall measure of well-being. A person's self-rated health is often quite similar to results obtained through other measures.

### Life Expectancy

Definition: An estimate of the average number of years that a person born in that year is expected to live, based on current mortality rates, for males, females, and total.

Source: B.C. Vital Statistics Agency.

Rationale: Life expectancy is used around the world as a basic indicator of the extent to which people are able to live a long life, that a population is healthy, has adequate food and access to health care, and is protected from disease and other threats that would shorten their life span. Although life expectancy measures quantity rather that quality of life, it remains a widely-used summary measure of population health. In B.C., Status Indians have a life expectancy that is 7 years less than other British Columbians.

### Chronic Conditions

Definition: Proportion of the population who report that they have been diagnosed by a health professional as having a chronic condition such as diabetes, arthritis, asthma, or allergies.

Source: First Nations and Inuit Regional Health Survey.
National Population Health Survey, Statistics Canada.

Rationale: The term "chronic conditions" covers a wide range of health problems that may last many years, and for which a complete cure may never be achieved. Chronic conditions can have a profound effects on a person's life, whether it be a child with a serious birth defect, a young adult with a spinal cord injury, or an older adult with arthritis. The proportion of the population who have a chronic condition is an indirect measure of quality of life. It also provides information about the number of people requiring treatment or support services.

### Infant Mortality

Definition: The number of infants who die in the first year of life, expressed as a rate per 1,000 live births.

Source: B.C. Vital Statistics Agency.

Rationale: The infant mortality rate - the number of babies who die in the first year of life, expressed as a rate per 1,000 live births - is a long-established measure, not only of child health, but also the social well-being of a society. A low rate reflects a healthy population, with good care and attention paid to the health of mothers and children. The Status Indian infant mortality rate has improved dramatically over the past 50 years. In 1999, the rate was 4.2 per 1,000 live births, approaching the general population rate of 3.7. Sudden Infant Death Syndrome (SIDS) is the major contributor to higher death rates among Status Indian infants.

### Age Standardized Mortality Rate

Definition: The number of deaths due to all causes and specific causes, as a rate per 10,000 population (age standardized), for the Status Indian population compared to other B.C. residents.

Source: B.C. Vital Statistics Agency.

Rationale: Measures long-term success in reducing deaths, compared to general population. Although the gap between Status Indians and other B.C. residents is narrowing, Status Indians have mortality rates that are significantly higher, on almost all causes of death.

### Potential Years of Life Lost

Definition: Potential years of life lost (PYLL) for males and females, from all causes and selected preventable causes, expressed as an age standardized rate per 1,000 standard population. PYLL is the number of years of life "lost" when a person dies before an established cut-off point, in this case age 75.

Source: B.C. Vital Statistics Agency.

Rationale: Potential Years of Life Lost (PYLL) focuses on premature deaths - deaths that occur in the younger age groups and that can, in theory, be prevented or postponed. PYLL is an overall indicator of population health, as well as the effectiveness of preventive programs. PYLL considers deaths before age 75 and weights them by age. A person dying at age 25, for example, has lost 50 years of life (75 minus 25 = 50 PYLL). To allow for meaningful comparisons, PYLL is expressed as an age standardized rate per 1,000 population. Status Indians in B.C. have a PYLL rate than is about three times that of other B.C. residents. Injury deaths are a major contributor to the higher PYLL rate.

## Community Environments

### Employment Rate

Definition: Proportion of the labour force age 15 and over who were employed in the week prior to Census Day. The labour force includes persons currently employed, plus those who are available and have taken specific steps to seek paid employment or self-employment within the reference period.

Source: Census, Statistics Canada.

Rationale: Employment (and unemployment) rates are traditional measures of the health of the economy. They also indicate the social and economic status of groups within society. Traditionally, Aboriginal people have faced disadvantages in employment, including high unemployment, occupational segregation, pay inequities, and limited opportunities for career progression. A low employment rate may reflect a shortage of jobs, a mismatch between jobs and educational qualifications and work experience, and/or a lack of child care. It may also reflect labour market discrimination.

### Employment to Population Ratio

Definition: Proportion of the population age 15 and over who were employed in the week prior to Census Day.

Source: Census, Statistics Canada.

Rationale: This indicator is similar to Employment Rate (above), except that the denominator is the total population. The total population includes those who are unwilling or unable to work and "discouraged workers" (those who want to work, but have abandoned their search).

### Average Employment Income

Definition: Average employment income among those who are full-year full-time workers.

Source: Census, Statistics Canada.

Rationale: Average employment income can be used to gauge pay equity between population groups. Aboriginal people with paid employment earn substantially less than the provincial average. In 1996, Aboriginal men working full-year full-time in B.C. earned $35,384, about 79 per cent of what non-Aboriginal earned. The wage gap for Aboriginal women was slightly less – they earned 83 cents for every dollar earned by non-Aboriginal women.

### Income Self-Sufficiency

Definition: Proportion of a population's aggregate total income that comes from sources other than government transfer payments (government transfer payments include income assistance, unemployment insurance benefits, federal child tax benefits, old age security pension, and other income from government sources).

Source: Census, Statistics Canada.

Rationale: Income self-sufficiency provides information about the level of reliance on the social safety net among population groups and communities. In 1996, 24 per cent of Aboriginal individuals' income came from government transfer payments, compared to 13 per cent for other British Columbians.

### Children in Low Income Families

Definition: Proportion of children under 12 years of age who live in families with family income under $20,000 in the year prior to the Census.

Source: Census, Statistics Canada.

Rationale: Child poverty is associated with poor health outcomes. Studies clearly show that abuse, poor school performance, criminal activity, teen pregnancy, and unemployment in later life are all more likely to be experienced by children raised in poverty. Data are not readily available on the proportion of the B.C. Aboriginal population with incomes below the Statistics Canada Low Income Cut-Off. However, statistics are available on the proportion of children living in families at different income levels. In 1996, 40 per cent of Aboriginal children lived in families with incomes below $20,000, compared to 17 per cent for other B.C. children.

### High School Graduation
### Post-Secondary Graduation

Definition: Proportion of the population age 15 and over who have a high school graduation certificate or higher and the proportion who have a post-secondary certificate, diploma, or degree of some type, based on the Census questions about educational attainment.

Source: Census, Statistics Canada.

Rationale: Educational attainment - the highest level of schooling that people achieve - is closely linked to their social and employment status, income, and health. Graduation from high school is one level of attainment that is commonly used as a measure of success, because high school completion represents a stepping stone to post-secondary education and to the world of work. Finishing a post-secondary program is another important level of achievement, because it enables students to master specific skills and knowledge and helps them to pursue their chosen career path. The level of educational attainment reflects the overall quality of the home and community learning environments, as well as the quality of the formal education system. The Aboriginal population, especially those living on reserve, have levels of educational attainment that are below the provincial average.

### Disparity in Socio-Economic Conditions

Definition: Rates for the Aboriginal population as a per cent of the non-Aboriginal population, based on various socio-economic measures of employment, income, and educational attainment.

Source: Calculated from data in the Census, Statistics Canada.

Rationale: Disparity in Socio-Economic Conditions attempts to measure of the difference in the standard of living of Aboriginal people and other British Columbians. Disparity can be measured in various ways, some of which require complex and technical calculations. One of the simplest ways to measure the gap is to determine the Aboriginal rate as a per cent of the non-Aboriginal rate. The Aboriginal population has levels of employment, income, and educational attainment that are about 80 of other British Columbians.

### Community Control

Definition: Proportion of Aboriginal communities that have taken steps towards achieving community self-governance, as measured by factors such as engagement in treaty negotiations and control over local health and social services (health care, education, child protection services).

Source: B.C. Treaty Commission.
Health Canada.
B.C. Ministry of Education.
B.C. Ministry of Children and Family Development.

Rationale: Individuals and communities are healthier when they are empowered and have a sense of control over their lives and their destinies. In recent years, the importance of preserving cultural identity and involving Aboriginal communities in control of community services has been recognized. The proportion of communities that are working towards self-governance reflects progress in supporting Aboriginal people to achieve self-determination and a collective sense of control.

### Children and Youth in Care

Definition: (a) Aboriginal children as a proportion of all children and youth in care (b) estimated proportion of all Aboriginal children and youth who are in care. "In care" means in the care of child welfare authorities, including children in care delegated to Aboriginal agencies. Population estimates are based on responses to the 1996 Census "ethnicity" questions and annual growth rates in the Status Indian population for subsequent years. For an explanation of the estimation method, see the Ministry of Children and Family Development's June 2002 publication, The Health and Well-being of Aboriginal Children and Youth in British Columbia, pages 32 and 42.

Source: B.C. Ministry of Children and Family Development. 1996 Census. Status Indian population estimates prepared by B.C. Vital Statistics Agency. BC STATS.

Rationale: A disproportionate number of Aboriginal children and youth are in government care, especially in the younger age groups. Aboriginal children comprise about 40 per cent of B.C.'s children in care, and everyone agrees that this number is too high. As more Aboriginal agencies assume responsibility for children in care, the number in care may go up, at least in the short term. Ultimately, if communities are stronger, families will be stronger, and so there will be fewer children and youth in care.

### Youth in Justice Institutions

Definition: The number of youth in justice institutions (average daily count), expressed as an estimated rate per 10,000 population age 12-17. The Aboriginal youth population is estimated at 7 per cent of the total B.C. population age 12-17 (7 per cent of B.C. youth were of Aboriginal ethnic origin, based on responses to the 1996 Census).

Source: B.C. Ministry of Children and Family Development. 1996 Census. BC STATS population estimates.

Rationale: These statistics provide an indication of youth involvement with the justice system. Statistics show that Aboriginal youth have a high rate of contact with the justice system relative to non-Aboriginal youth.

## Healthy Growth and Development

### Low Birthweight

Definition: Proportion of live births with a birthweight less than 2500 grams.

Source: B.C. Vital Statistics Agency.

Rationale: The low birthweight rate is a well-established measure of child health. Babies born with a low birthweight are more likely to die during the first year of life. They are also more likely to have problems such as birth defects, illnesses, and poor health throughout childhood, and learning difficulties. Status Indian babies have a slightly higher rate of low birthweight than other babies born in B.C. (5.2 per cent vs. 4.7 per cent). North American native populations have a higher average birthweight than non-Natives, and "high birthweight" babies are more common. The exact causes and the health implications of this difference in birthweight distribution are not known. A genetic disposition to heavier babies, higher rates of glucose intolerance during pregnancy, and nutritional differences are some of the explanations that have been proposed.

### Pre-Term Births

Definition: Proportion of live births with gestational age less than 37 weeks.

Source: B.C. Vital Statistics Agency.

Rationale: About two-thirds of low birthweight births are pre-term (born too early, before the 37th week of pregnancy). The cause of most pre-term births is unknown, and this is an area that requires more study. Nine per cent of Status Indians babies are pre-term, compared to 6 per cent for other British Columbians.

### Post-Neonatal Mortality

Definition: The number of infants who die between the ages of 28 and 364 days, expressed as a rate per 1,000 live births.

Source: B.C. Vital Statistics Agency.

Rationale: For Status Indian babies, deaths in the first month of life (the neonatal period) have reached the low rate experienced by the general population. A gap remains in post-neonatal deaths, with Status Indians having a rate of 3.2 per 1,000, about three times the rate of other British Columbians. Sudden Infant Death Syndrome (SIDS) rates showed a steep decline in the 1990s, but SIDS remains the major cause of excess deaths in the post neonatal period. Exposure to second-hand smoke is the most common precipitating factor.

### Teen Pregnancy Rate

Definition: The estimated number of pregnancies per 1,000 teenage women. The estimate is based on the number of pregnancies resulting in a live birth, stillbirth, induced abortion (ICD-9 635, 636, 638) performed in a hospital or in a clinic, or hospitalization due to miscarriage (ICD-9 630-634, 637). Multiple birth events (i.e., twins, triplets) are only counted as one pregnancy.

Source: Hospital Morbidity Database and B.C. Vital Statistics Agency.

Rationale: Deciding if, when, and how often to become pregnant is an important aspect of reproductive health. The teen pregnancy rate provides indirect information about the effectiveness of sexuality education and access to contraceptive services and products, as it is assumed that most pregnancies among teen women, particularly those under age 18, are unintended. On average, Aboriginal women have more children and have them earlier in life than other B.C. women. The impact of teen pregnancy and the utility of this indicator require more discussion with Aboriginal communities.

### School Completion Rate

Definition: The proportion of students who graduate with a Dogwood Diploma within six years of starting Grade 8 for the first time in a B.C. public or independent school.

Source: B.C. Ministry of Education.

Rationale: The high school completion rate is commonly used to measure the overall learning environment in communities. Aboriginal students are less likely to progress from year to year and less likely to graduate than non-Aboriginal students, although the gap has been gradually narrowing. Continued improvements in Aboriginal results, with a long-term goal of parity with non-Aboriginal students, would indicate success in ensuring that Aboriginal students obtain the qualifications and skills required to participate in the economy and to continue on to post-secondary education.

## Foundation Skills Assessment Scores

Definition: The proportion of Grade 4 students meeting expectations for the Foundation Skills Assessment (FSA) in reading, writing, and numeracy.

Source: B.C. Ministry of Education.

Rationale: Foundation Skills Assessments measure the development of specific skills in students and indirectly, the quality of the student learning environment. Aboriginal student FSA results are significantly lower than non-Aboriginal students. Improvements in Aboriginal results, with a long-term goal of parity with non-Aboriginal students, would indicate success in ensuring that Aboriginal students obtain the qualifications and skills required to participate in the economy and in everyday life.

## Average GPA

Definition: The average GPA (grade point average) of students who graduate from high school with a Dogwood Certificate.

Source: B.C. Ministry of Education.

Rationale: A high GPA and proper course selection are important for entry to post-secondary institutions. At the provincial level, the GPA for Aboriginal students is rising, and the gap between Aboriginal and non-Aboriginal graduates is narrowing. Continued improvement would indicate success in ensuring that Aboriginal students obtain the qualifications required to move to post-secondary education.

## Smoking Rate

Definition: Proportion of the population who are current smokers. Current smokers are those who smoke cigarettes on either a daily or an occasional basis

Source: Tobacco Use in B.C. 1997, Heart and Stroke Foundation of B.C. and Yukon.

Rationale: Smoking is thought to be the single most important preventable cause of illness and death. The proportion of the population who smoke is a key measure of the success of policies and programs to reduce tobacco use. Smoking rates are high (45 per cent in 1997) among the Aboriginal population – about twice the rate of the overall population (23 per cent).

### Binge Drinking

| | |
|---|---|
| Definition: | High school students who report consuming 5 or more drinks within a couple of hours in the past month, as a proportion of those students who have used alcohol. |
| Source: | Adolescent Health Survey, McCreary Centre Society. |
| Rationale: | The harms caused by alcohol misuse are substantial, and in terms of substance abuse, the costs of alcohol use are exceeded only by the costs of tobacco. Binge drinking is an indicator of risky drinking behaviour. Half (51 per cent) of Aboriginal students who drink report they have engaged in binge drinking, compared to 43 per cent of non-Aboriginal students. |

### Connectedness

| | |
|---|---|
| Definition: | The proportion of students who report low, medium, and high levels of connectedness with their family and with their school. Scores are based on a series of survey questions that ask students to reflect on their satisfaction with relationships, including whether they share in fun activities with their families, and whether they feel involved in and fairly treated at school. Note: The survey is based on the experiences of youth who are in school, not those who have dropped out or who are living on the streets. |
| Source: | Adolescent Health Survey, McCreary Centre Society. |
| Rationale: | "Connectedness" measures young people's sense of belonging and involvement. Students who are strongly connected to their families are more likely to have higher educational expectations and less likely to engage in risky behaviours such as binge drinking and early and unprotected sexual intercourse. Aboriginal youths report feeling strongly connected to school and family at about the same rate as non-Aboriginal students. |

## Physical Environment

### Housing Quality

| | |
|---|---|
| Definition: | The proportion of housing units on reserve that are in "adequate" condition (that do not require any minor or major renovations or replacement). |
| Source: | Housing and Infrastructure Assets Summary Reports, Indian and Northern Affairs Canada. |
| Rationale: | The lack of adequate housing continues to be a challenge in many Aboriginal communities. In reserve communities, earnings are less, and remote locations mean that construction costs are higher. This indicator measures progress in tackling the housing problem on reserve. In 1998-99, 56 per cent of the 16,025 houses on B.C. reserves were in adequate condition, up from 40 per cent in 1992-93. |

## Core Housing Need

Definition: Proportion of renter households that are unable to afford suitable and adequate housing, based on the Core Housing Need index developed by the Canadian Mortgage and Housing Corporation (CMHC).

Source: CMHC, using data from the Census, Statistics Canada.

Rationale: Core housing need is an index used nationally to measure the number of households in an area that cannot find housing which is adequate (in good repair and with full bathroom facilities) and suitable (uncrowded) without spending more than 30 per cent of their gross household income on rent. As a general rule, households are considered to have affordability problems if more than 30 per cent of household income is spent on housing costs. At that level of spending, it is likely that there won't be enough money for other necessities such as food, clothing, and transportation, and households will face difficult choices such as sacrificing food, working longer hours, or relying on food banks. These choices may lead to poor health. Housing need is the norm for Aboriginal lone-parent households, especially those living in urban areas. Forty-four per cent of Aboriginal households in Vancouver – and three-quarters of Aboriginal lone-parent households in Vancouver – are considered to be in core housing need.

## Community Services

Definition: Proportion of reserve communities that have adequate electrification, road access, solid waste disposal, and fire protection services.

Source: Housing and Infrastructure Assets Summary Reports, Indian and Northern Affairs Canada.

Rationale: This indicator measures the adequacy of community infrastructure in reserve communities. Of the 468 on-reserve communities in B.C. in 1998-99, most (82 per cent) had adequate electrification. Two-thirds had adequate solid waste service, while less than half (46 per cent) had adequate fire protection services.

### Exposure to Second-Hand Smoke

Definition: Proportion of non-smokers (age 12 and older) who have daily or nearly-daily exposure to second-hand smoke at home, at work or school, or in other public settings. Proportion of households with children age 11 years and under where there is daily or nearly-daily exposure to second-hand smoke.

Source: Tobacco Use in B.C. 1997, Heart and Stroke Foundation of B.C. and Yukon.

Rationale: Second-hand smoke is a dangerous toxin to which no one should be exposed against their wishes - whether at work, in public places, or in people's homes. While second-hand smoke is dangerous for people of all ages, it can be particularly harmful to children's lungs, with short-term and long-term health effects. The proportion of the population exposed to second-hand smoke measures the success of policies and programs to reduce exposure by making public places smoke-free, encouraging parents to maintain smoke-free homes, and reducing the use of tobacco. In 1997, about one in five (21 per cent) of Aboriginal non-smokers reported being exposed to second-hand smoke. In almost one-third of Aboriginal households with children (32 per cent), there was daily or nearly-daily exposure.

### Drinking Water Quality

Definition: The number and proportion of households on reserve with water supplies that satisfy the health-related requirements of the Guidelines for Canadian Drinking Water Quality.

Source: Housing and Infrastructure Assets Summary Reports, Indian and Northern Affairs Canada.

Rationale: Clean drinking water is a basic requirement for health. The proportion of water systems meeting Canadian guidelines provides an indication as to the quality and safety of drinking water supplies. The most recent data (1998-99) show that 82 per cent of housing units on B.C. reserves had water supplies that met the health-related requirements of the Guidelines for Canadian Drinking Water Quality. Comparable data are not available for the water systems under provincial jurisdiction.

### Mercury Levels

Definition: Proportion of individuals tested who show an "at risk" level (greater than 100 ppb) of mercury.

Source: Aboriginal Human Hair and Blood Sampling Program, Health Canada.

Rationale: Some Canadian communities have levels of mercury, PCBs, or other contaminants that exceed Health Canada's guidelines. Aboriginal people who consume traditional diets are at increased risk, because toxic contaminants tend to accumulate in wild meat, fish, and marine mammals. For the Aboriginal population, Health Canada runs a human hair and blood sampling program that estimates the risk to individuals from mercury, PCBs, and certain pesticides. In the B.C. samples, no "at risk" levels of mercury have been found since the late 1970s.

### Progress in Relationship with the Land

(see Progress in Community Wellness, page 145)

## Health Services

### Childhood Immunizations

| | |
|---|---|
| Definition: | Proportion of two-year-old First Nations children on reserve who have been fully immunized against diphtheria, pertussis, tetanus, polio, Haemophilus influenzae type b (Hib), measles, mumps, and rubella. |
| Source: | First Nations and Inuit Health Branch, Health Canada. |
| Rationale: | This indicator measures coverage for childhood immunization programs, compared to national and provincial targets. Routine immunizations for children are among the most cost-effective of all health interventions. Low rates indicate a problem in access to or delivery of this highly effective preventive health service. Eighty-two per cent of First Nations children were immunized in 2000. This is equivalent to the provincial rate, but below the national target of 97 per cent. |

### Screening Mammography

| | |
|---|---|
| Definition: | Estimated proportion of Aboriginal women age 50-74 who received mammography screening at least once in the past two years. Estimates are based on women who attend the Screening Mammography Program of B.C. and who respond to the ethnicity question on a self-administered questionnaire completed at their first appointment. |
| Source: | Screening Mammography Program of B.C. and BC STATS population estimates. |
| Rationale: | Screening mammography is an important strategy for early detection of breast cancer. Screening rates measure the extent to which mammography screening programs are reaching their target group. A low rate would indicate that some women are experiencing problems accessing this service. |

### Pap Smears

Definition: Proportion of women age 20-69 who have had a Pap test within the last 20 months.

Source: Cervical Cancer Screening Program, B.C. Cancer Agency and BC STATS population estimates.

Rationale: Pap tests detect pre-malignant lesions before cancer of the cervix develops, allowing time for treatment that avoids progressive, fatal disease. Pap smear rates measure the extent to which cervical cancer screening programs are reaching the target population. Low rates indicate that some women are experiencing barriers to accessing this service. A 1990 study found that only half of Status Indian women in B.C. had had a Pap test within the last three years, while the figure for the B.C. population overall was 85 per cent. Current data are not available on Pap smear rates for Aboriginal women, but a recently signed data-sharing agreement will allow us to track improvements in Aboriginal women's use of this highly effective cancer screening test.

### MSP Utilization

Definition: The number of patients who saw at least one physician (including medical health professionals such as chiropractors and physiotherapists), as a rate per 1,000 population (age standardized). Data are based on practitioner billings to the provincial Medical Services Plan.

Source: Medical Services Plan (MSP).

Rationale: MSP utilization rates provide information about the number of the Status Indians that have contact with physicians per 1,000 population, compared with other British Columbians. Given the poorer health status of Aboriginal people, we would expect to find a higher rate of utilization in this population.

### Hospitalization Rate

Definition: The number of cases discharged from hospitals, as a rate per 1,000 population (age standardized).

Source: Hospital Morbidity Database, B.C. Ministry of Health Services.

Rationale: Hospitalization rates provide information about the rate at which Status Indians use hospital services, compared with other British Columbians. Given the poorer health status of Aboriginal people, we would expect to find higher utilization rates in this population. However, a lower rate of utilization does not necessarily mean a problem with access, because we don't know what the "ideal" rate of hospitalization would be. On average, Status Indians have a hospitalization rate that is 1.6 times the rate of other British Columbians.

### Residential Care Use
### Home Support Services Use

Definition: The number of days spent in residential care facilities and the number of hours of home support services received, as a rate per 1,000 population (age standardized).

Source: Continuing Care Data Warehouse, B.C. Ministry of Health Services.

Rationale: Residential care and home support services rates provide information about the rate at which Status Indians use the support services of the formal health care system, compared with other British Columbians. On average, Status Indians use fewer residential care and home support services than other British Columbians. This could be because services are not available in their communities or because preferences for receiving care in other ways.

### Preventable Admissions

Definition: Hospitalizations for "ambulatory care sensitive conditions", conditions where hospital admission is usually not needed, if patients have timely access to high quality care in the community. Conditions are based on the list used by Alberta Health: primary diagnosis of ICD-9 or ICD-9-CM code 250 (diabetes), 300 (neurosis), 291-292 and 303-305 (alcohol-drug related), 311 (depression), 401-405 (hypertension), and 493 (asthma). Hospitalizations are expressed as a rate per 1,000 population (age standardized).

Source: Hospital Morbidity Database.

Rationale: Diabetes, hypertension, asthma, depression, and other long-term conditions can usually be managed in the community, without the need for hospitalization. While not all admissions for these conditions are preventable, it is assumed that appropriate prior care could prevent a significant proportion. A disproportionately high rate is presumed to reflect problems in access to disease prevention and/or primary care services. Compared to other British Columbians, Status Indians are three times as likely to be admitted to hospital for these "preventable" conditions.

### Children's Dental Surgeries

Definition: The number of surgeries performed in hospital (in-patient or day surgery) for tooth extraction, surgical removal of teeth, and other operations on teeth (Surgical Short List Codes 041-043) on children age 0 to 14, as a rate per 1,000 children in this age group.

Source: Hospital Morbidity Database, B.C. Ministry of Health Services.

Rationale: The majority of children who have dental surgery in hospital are being treated for early childhood caries – a preventable disease. A high level of dental surgeries suggests that there are financial, cultural, social, or geographic barriers to prevention and treatment. Status Indian children had a rate of 25 surgeries per 1,000 in 2000-01, about 4 times rate of other B.C. children (6 per 1,000).

### Antibiotic Prescribing

Definition: Proportion of children age 0-14 diagnosed with otitis media (ICD-9 381-382) who received a prescription for antibiotics after visiting a general practitioner and, of those who received a prescription, the proportion who received the first-line antibiotic recommended in the anti-infective guidelines.

Source: Medical Services Plan and PharmaNet.

Rationale: Otitis media (middle ear infection) is one of the most common problems of infancy and early childhood. Most (about 80 per cent) ear infections will get better on their own, whether treated with antibiotics or not. The proportion of children who receive a prescription for antibiotics and the antibiotic prescribed provides information about compliance with antibiotic prescribing guidelines. A high rate indicates that some children may be receiving unnecessary or inappropriate drug treatments. In the longer term, too much use of antibiotics can lead to organisms that are resistant to first-line treatment.

### Prescriptions for Benzodiazepines
### Prescriptions for Anti-Depressants

Definition: Proportion of the Registered Indian population with claims for tranquilizers or sleeping pills (benzodiazepines, PTC codes 28:12.08 and 28:24.08) and anti-depressants (PTC code 28:16.04) in a given year.

Source: Non-Insured Health Benefits Program, Health Canada.

Rationale: Prescription drug data do not tell us whether people are receiving appropriate treatment, but they do provide a first step towards understanding where potential problems might be. A high rate of prescribing for these drugs suggests the need to address the underlying problems that are causing anxiety, depression, or insomnia.

### Community Follow-up after Hospitalization

Definition: Proportion of persons hospitalized for a mental health diagnosis who receive at least one contact with a community mental health centre or a fee-for-service psychiatrist or general practitioner within 30 days of discharge. Hospitalizations are based on in-patient separations (all levels of care) for patients age 15 to 64 with a primary diagnosis of ICD-9 290-314, V61 or V62.

Source: Hospital Morbidity Database.
Client/Patient Information Management (CPIM) LAN Database. MSP Claims Database.

Rationale: Most people who are hospitalized for psychiatric reasons require follow-up services once they are discharged from hospital. To maintain continuity of care and to prevent re-admission to hospital, most individuals should have at least one out-patient contact within 30 days of discharge. The proportion who have community follow-up within this time frame is a measure of the mental health system's responsiveness and continuity of care. A high rate of community follow-up indicates that hospital and community services are well coordinated and that community services are available and accessible. The community follow-up rate was 60 per cent for Status Indians in 2000-01, well below the rate of 85 per cent for other British Columbians.

### Representation in Health Professions

Definition: (a) Aboriginal students as a proportion of all students in health professions.
(b) Aboriginal health professionals as a proportion of all health professionals.

Source: (a) Health educational institutions. (b) Census, Statistics Canada.

Rationale: Aboriginal people are under-represented in the health care professions. These indicators measure progress towards reducing this inequity.

## Disease and Injury Prevention

### Diabetes

Definition: Incidence (new cases), prevalence (number of people with diabetes at a specific point in time), and complication rates for diabetes, based on data from patients' contacts with the health care system.

Source: National Diabetes Surveillance System.

Rationale: Surveys have shown that diabetes rates are high among Aboriginal people in Canada – more than three times the rate of the general population. Diabetes can be prevented, or its onset delayed, through healthy eating, maintaining a healthy body weight, and increased physical activity. Regular check-ups and care can help prevent complications from the disease. A diabetes database is currently being established in B.C., in conjunction with the National Diabetes Surveillance System. First results are expected in 2002.

### Arthritis Prevalence

Definition: Proportion of the population who report that they have been diagnosed by a health professional as having arthritis.

Source: First Nations and Inuit Regional Health Survey. National Population Health Survey.

Rationale: Surveys have shown that arthritis is more common among Aboriginal people. The reasons for this higher prevalence are not known, but genetic factors may play a part. Prevention possibilities are limited, given current knowledge. The number and proportion of the population with arthritis provides information about the number of people requiring treatment or support services.

### Arthritis Hospitalization Rate

Definition: The number of cases admitted to hospital with a diagnosis of arthritis (ICD-9 714-715), as a rate per 1,000 population 30-44, 45-64, and 65 and over.

Source: Hospital Morbidity Database, B.C. Ministry of Health Services.

Rationale: Most types of arthritis can be managed with home treatment, without the need for hospitalization. A high rate of arthritis hospitalizations may indicate the need for improved access to community-based treatment and rehabilitation services.

### Disability rate

Definition: Proportion of the population who report having a disability or handicap or being limited in certain activities on a continuing basis because of a health problem.

Source: Aboriginal Peoples Survey.
First Nations and Inuit Health Survey. National Population Health Survey, Statistics Canada.

Rationale: The disability rate gives us information about the effects that health problems are having on people's daily lives. Results are based on questions about whether individuals are limited on an ongoing basis because of a health problem. Almost one-third of Aboriginal Canadians (age 15 and over) reported having a disability in 1991 – more than double the national rate. The difference was particularly pronounced in the younger age groups, where Aboriginal people were three times as likely to have a disability.

### Smoking-Attributable Deaths

Definition: The number of deaths attributable to smoking, as a rate per 10,000 population (age-standardized).

Source: B.C. Vital Statistics Agency.

Rationale: Smoking is thought to be the single most important preventable cause of illness and death. Smoking-attributable death rates measure the long-term success of policies and programs to reduce tobacco use.

### Alcohol-Related Deaths

Definition: The number of deaths in which alcohol was the underlying cause of death, such as alcoholic liver disease or alcoholic psychoses, as well as diseases or accidents where alcohol was specified on the death certificate as a contributing factor, as a rate per 10,000 population (age standardized). See Vital Statistics annual reports for a detailed definition.

Source: B.C. Vital Statistics Agency.

Rationale: Aboriginal people are at higher risk for alcohol-related deaths, with a death rate that is almost six times that of other British Columbians. Alcohol-related death rates are one measure of the success of policies and programs to prevent and treat alcohol misuse and to address the underlying causes.

### HIV/AIDS Deaths

Definition: The number of deaths due to HIV/AIDS (ICD-9 042-044; ICD-10 B20-B24), as a rate per 10,000 (age standardized).

Source: STD/AIDS Control, B.C. Centre for Disease Control Society.

Rationale: Death rates due to HIV/AIDS are increasing among Status Indians, while rates in the general population are declining. This is one of the few causes of death where the health status gap is widening. The HIV/AIDS death rate measures the results of efforts to control the spread of HIV; strategies include prevention programs aimed at high-risk communities, access to early testing, improved access to antiretroviral treatments, and actions to address the underlying factors that place people at increased risk of HIV infection.

### Tuberculosis

Definition: The number of active cases of tuberculosis (new active and reactivated) reported in a given time period, expressed as a rate per 100,000 population.

Source: Tuberculosis Control, B.C. Centre for Disease Control Society.

Rationale: Tuberculosis is a serious but treatable disease that continues to be a health problem among high-risk groups, which include Aboriginal people and immigrants from countries where tuberculosis is common. The number and rate of new cases measures progress in tuberculosis control. It also reflects a community's socio-economic status and general health status.

### Unintentional Injuries

Definition: The number of hospitalizations and deaths due to unintentional injuries, as a rate per 10,000 (age standardized). The term unintentional ("accidental") includes injuries due to causes such as motor vehicle collisions, falls, drowning, burns, and poisoning.

Source: Hospital Morbidity Database and B.C. Vital Statistics Agency.

Rationale: Injury rates provide information about the safety of the environments in which people live, work and play, the safety of the products they use, and risk-taking behaviour, especially among youth. Hospitalization and death rates measure long-term success in reducing unintentional injuries. Results reflect the adequacy and effectiveness of injury prevention efforts, including public education, product development and use, community and road design, and prevention and treatment resources. The Aboriginal population has injury patterns that are similar to those of the total population, except with higher rates. Motor vehicle accidents are the leading cause of injury deaths. Accidental poisoning (which includes drug overdose deaths), falls, fires, and drowning are other leading causes.

### Suicide

Definition: The number of suicide deaths (ICD-9 E950-E959; ICD-10 X60-84, Y87.0), expressed as a rate per 10,000 population (age standardized).

Source: B.C. Vital Statistics Agency.

Rationale: Suicide rates have been called "indicators of needy communities" (Cooper, 1995). In the Aboriginal population, the highest suicide rates are among youth age 15-24. There are some First Nations communities that have had no youth suicides in recent years. A B.C. study suggests that variability in First Nations suicide rates is associated with community efforts to promote culture and to exert local control over important aspects of community life.

### Illicit Drug Deaths
### Drug-Induced Deaths

| | |
|---|---|
| Definition: | (a) The number of deaths due to illicit drug overdose, as determined by the B.C. Coroners Service. (b) The number of deaths where drugs were the underlying cause of death, as a rate per 10,000 population (age standardized). This includes causes such as drug dependence, accidental poisonings (overdose deaths), and suicides involving drugs. The causes of death classified as drug-induced are based on those used by the National Center for Health Statistics. See Glossary of Vital Statistics annual reports for a list of causes and ICD codes. |
| Source: | (a) B.C. Coroners Service.<br>(b) B.C. Vital Statistics Agency. |
| Rationale: | Overdose deaths are the final manifestation of the harms that can result from illicit drug use. Statistics on drug-induced deaths show a continuing higher rate among the Status Indian population – about three times as high as other residents of B.C. Deaths and other harms associated with injection drug use can be greatly reduced through comprehensive and coordinated harm reduction strategies. The number and rate of illicit drug deaths provides one indication of the success of efforts to address this health and social issue. |

# Appendix D

# Comparative Indicator Data for the Health and Well-being of Aboriginal People and Other British Columbians

This Appendix summarizes the indicator data presented throughout the report. For definitions and data sources, see Appendix C. For regional data, see Appendix E.

**Indicators of the Health and Well-being of Aboriginal People and Other British Columbians**

| Indicator | Aboriginal People | Other British Columbians | Ratio: Aboriginal /Others |
|---|---|---|---|
| **Health status** | | | |
| **"Excellent" health (self-rated), men** | **16%** | **28%** | **0.6** |
| "Excellent" health (self-rated), women | 11% | 24% | 0.5 |
| **Life expectancy (years)** | **72.25** | **79.73** | **0.9** |
| Infant mortality rate | 4.0 | 3.7 | 1.1 |
| **Death rate – all causes** | **81.5** | **55.6** | **1.5** |
| Premature deaths (PYLL) – all causes | 142.0 | 52.5 | 2.7 |
| **PYLL – natural causes** | **82.2** | **36.9** | **2.2** |
| PYLL – external causes | 59.8 | 15.6 | 3.8 |

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## Indicators of the Health and Well-Being of Aboriginal People and Other British Columbians

| Indicator | Aboriginal People | Other British Columbians | Ratio: Aboriginal /Others |
|---|---|---|---|
| **Community Environments** | | | |
| Employment rate | 75% | 91% | 0.8 |
| Employment to population ratio | 46% | 60% | 0.8 |
| Average employment income – men | $35,384 | $44,947 | 0.8 |
| Average employment income – women | $26,031 | $31,334 | 0.8 |
| Income under $20,000, families with children | 41% | 16% | 2.6 |
| Income self-sufficiency | 76% | 88% | 0.9 |
| High school graduation (population age 15+) | 51% | 70% | 0.7 |
| Post-secondary education (population age 15+) | 27% | 37% | 0.7 |
| Proportion of children in care (estimate) | 5.2% | 0.7% | 7.4 |
| Youth in justice institutions, average daily count (estimated rate per 10,000 youth 12-17) | 37.7 | 6.9 | 5.4 |
| Responsibility for community health services (per cent of Bands) | 58% | - | - |
| Responsibility for child and family services | 56% | - | - |
| **Healthy Growth and Development** | | | |
| Low birthweight rate | 5.2% | 5.1% | 1.0 |
| Pre-term births | 9.6% | 6.8% | 1.4 |
| Post neonatal mortality rate | 2.3 | 1.2 | 2.0 |
| Teen pregnancy rate (age 15-19) | 131 | 35 | 3.7 |
| School completion rate | 42% | 79% | 0.5 |
| Grade 4 students meeting expectations | | | |
| Reading | 55% | 80% | 0.7 |
| Writing | 77% | 92% | 0.8 |
| Numeracy | 65% | 85% | 0.8 |
| Average GPA | 2.69 | 2.97 | 0.9 |
| Smoking rate, age 12+ | 45% | 23% | 2.0 |
| Smoking rate, teens 12-18 | 41% | 20% | 2.1 |
| Binge drinking, students who drink | 51% | 43% | 1.2 |
| "Progress" in fighting alcohol and drug abuse | 44% | - | - |
| Family connectedness, "high" level | 12% | 15% | 0.8 |
| School connectedness, "high" level | 11% | 13% | 0.8 |
| **Physical Environment** | | | |
| Sub-standard housing, on reserve | 44% | - | - |
| Core housing need, Vancouver households | 44% | - | - |
| No fire protection, reserve communities | 40% | - | - |
| Exposure to second-hand smoke, age 0-11 | 32% | 18% | 1.8 |
| Water supply meets drinking water guidelines | 82% | - | - |
| At risk mercury levels, hair sampling program | 0% | - | - |
| "Progress" in housing quality | 69% | - | - |
| "Progress" in relationship with land | 56% | - | - |

### Indicators of the Health and Well-Being of Aboriginal People and Other British Columbians

| Indicator | Aboriginal People | Other British Columbians | Ratio: Aboriginal /Others |
|---|---|---|---|
| **Health Services** | | | |
| Childhood immunization | 82% | 82% | 1.0 |
| Screening mammography (estimate) | 36% | 49% | 0.7 |
| Pap smears | 52% | 85% | 0.6 |
| MSP utilization (patients per 1,000) | 839 | 872 | 1.0 |
| Hospital use (cases per 1,000) | 274 | 172 | 1.6 |
| Residential care use (days per 1,000) | 1,893 | 2,273 | 0.8 |
| Home support services (hours per 1,000) | 935 | 1,829 | 0.5 |
| Preventable admissions (rate per 1,000) | 11.2 | 3.7 | 3.0 |
| Children's dental procedures (cases per 1,000) | 24.9 | 6.2 | 4.0 |
| Benzodiazepene prescriptions, women 50+ | 20% | - | - |
| Anti-depressant prescriptions, age 25+ | 12% | - | - |
| Community follow-up after hospitalization | 60% | 85% | 0.7 |
| Workers in health professions, e.g., doctors, dentists, pharmacists | 0.06% | 1.05% | 0.1 |
| "Progress" in availability of First Nations health professionals | 44% | - | - |
| **Disease and Injury Prevention** | | | |
| Diabetes | 9.9% | 3.1% | 3.2 |
| Arthritis | 17% | 5% | 3.4 |
| Disabilities | 31% | 15% | 2.1 |
| Tuberculosis (cases per 100,000) | 20 | 7 | 2.9 |
| Death rate – HIV/AIDS | 1.2 | 0.5 | 2.4 |
| Death rate – unintentional (accidental) injuries | 13.5 | 3.6 | 3.8 |
| Death rate – suicide | 3.1 | 1.2 | 2.6 |
| Death rate – drug-induced deaths | 3.8 | 1.1 | 3.5 |
| Death rate – alcohol-related deaths | 20.4 | 3.2 | 6.4 |
| Death rate – smoking-attributable deaths | 16.3 | 12.7 | 1.3 |

For indicators where more is better, e.g., life expectancy and employment, Aboriginal people have rates than are lower than (worse) that other British Columbians, a ratio less than 1.0. Where more is worse, e.g., deaths, smoking, Aboriginal people have rates that are above the provincial average, a ratio greater than 1.0. Infant mortality, low birthweight, childhood immunizations, and Medical Services Plan utilization are the only measures where Aboriginal people have rates roughly equal to the general population.

For definitions and data sources, see Appendix C.

Some of the data in the column labelled "Aboriginal People" pertain to specific Aboriginal groups, i.e., Status Indians or First Nations on reserve. The table in the Executive Summary identifies which populations are covered.

Data in the preceding table are for the following years:

### Health Status

"Excellent" health status: 1997 (First Nations); 1996-97 (total B.C. population).
Life expectancy: 1996-2000.
Infant mortality rate and death rate – all causes: 2000.
PYLL: 1991-2000.

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| Water supply meets drinking water guidelines | 82% | - | - |
| At risk mercury levels, hair sampling program | 0% | - | - |
| "Progress" in housing quality | 69% | - | - |
| "Progress" in relationship with land | 56% | - | - |

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| MSP utilization (patients per 1,000) | 839 | 872 | 1.0 |
| Hospital use (cases per 1,000) | 274 | 172 | 1.6 |
| Residential care use (days per 1,000) | 1,893 | 2,273 | 0.8 |
| Home support services (hours per 1,000) | 935 | 1,829 | 0.5 |
| Preventable admissions (rate per 1,000) | 11.2 | 3.7 | 3.0 |
| Children's dental procedures (cases per 1,000) | 24.9 | 6.2 | 4.0 |
| Benzodiazepene prescriptions, women 50+ | 20% | - | - |
| Anti-depressant prescriptions, age 25+ | 12% | - | - |
| Community follow-up after hospitalization | 60% | 85% | 0.7 |
| Workers in health professions, e.g., doctors, dentists, pharmacists | 0.06% | 1.05% | 0.1 |
| "Progress" in availability of First Nations health professionals | 44% | - | - |
| **Disease and Injury Prevention** | | | |
| Diabetes | 9.9% | 3.1% | 3.2 |
| Arthritis | 17% | 5% | 3.4 |
| Disabilities | 31% | 15% | 2.1 |
| Tuberculosis (cases per 100,000) | 20 | 7 | 2.9 |
| Death rate – HIV/AIDS | 1.2 | 0.5 | 2.4 |
| Death rate – unintentional (accidental) injuries | 13.5 | 3.6 | 3.8 |
| Death rate – suicide | 3.1 | 1.2 | 2.6 |
| Death rate – drug-induced deaths | 3.8 | 1.1 | 3.5 |
| Death rate – alcohol-related deaths | 20.4 | 3.2 | 6.4 |
| Death rate – smoking-attributable deaths | 16.3 | 12.7 | 1.3 |

For indicators where more is better, e.g., life expectancy and employment, Aboriginal people have rates than are lower than (worse) that other British Columbians, a ratio less than 1.0. Where more is worse, e.g., deaths, smoking, Aboriginal people have rates that are above the provincial average, a ratio greater than 1.0. Infant mortality, low birthweight, childhood immunizations, and Medical Services Plan utilization are the only measures where Aboriginal people have rates roughly equal to the general population.

For definitions and data sources, see Appendix C.

Some of the data in the column labelled "Aboriginal People" pertain to specific Aboriginal groups, i.e., Status Indians or First Nations on reserve. The table in the Executive Summary identifies which populations are covered.

Data in the preceding table are for the following years:

### Health Status

"Excellent" health status: 1997 (First Nations); 1996-97 (total B.C. population).
Life expectancy: 1996-2000.
Infant mortality rate and death rate – all causes: 2000.
PYLL: 1991-2000.

### Community Environments

Employment, income, and education: 1996.
Children in care: March 31, 2002.
Youth in justice institutions: fiscal year 2001-02.
Responsibility for community health services: 2002.
Responsibility for child and family services: 2002.

### Healthy Growth and Development

Low birthweight rate and pre-term births: 2000.
Post neonatal mortality rate: 3-year average 1998-2000.
Children in care: March 2001.
Teen pregnancy rate: 1999.
School completion rate: 2000-01
Grade 4 students meeting expectations: 2000-01
Average GPA: 1999-00.
Smoking rate: 1997.
Progress in fighting alcohol and drug abuse: 1997
Binge drinking: 1998.
Connectedness: 1998.

### Physical environment

Sub-standard housing: 1998-99.
Core housing need: 1996.
Fire protection: 1998-99.
Exposure to second-hand smoke: 1997.
Water supply meeting drinking water guidelines: 1998-99.
At risk mercury levels: 1983-1996.
Progress in housing quality: 1997.
Progress in relationship with land: 1997.

### Health Services

Childhood immunization: 2000 (First Nations) and April 2001 (B.C.).
Screening mammography: fiscal year 1999-2000.
Pap smears: 1990.
MSP Utilization: 2000-01.
Hospital Use: 2000-01.
Residential care and home support services: fiscal year 1999-2000.
Preventable admissions: fiscal year 2000-2001.
Children's dental procedures: fiscal year 2000-2001.
Benzodiazepine and anti-depressant prescriptions: 2000.
Community follow-up after hospitalization: fiscal year 2000-2001.
Workers in health professions: 1996.
Progress in availability of First Nations health professionals: 1997.

### Disease and Injury Prevention

Diabetes: 1991.
Arthritis: 1997 (First Nations on reserve) and 1996-97 (B.C. population).
Disabilities: 1991.
Tuberculosis: 2000.
Death rates: annual average for period 1991-2000.

# Appendix E
# Regional Data

Where data permit, this Appendix provides indicator data for 20 geographic regions, for the most recent year available. Figures, notes and sources for the data are also presented in this Appendix.

Maps showing the names and boundaries of the health regions are found in Appendix G.

| Health Indicators Regional Data | East Kootenay | West Kootenay | North Okanagan | Okanagan Similkameen | Thompson | Fraser Valley | South Fraser Valley | Simon Fraser | Coast Garibaldi | Central Vancouver Island | Upper Island/Central Coast | Cariboo | North West | Peace Liard | Northern Interior | Vancouver | Burnaby | North Shore | Richmond | Capital | British Columbia | Best Rate | Worst Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **HEALTH STATUS** | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Life expectancy at birth (years) | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indian men | 64.2 | | 71.5 | 69.4 | 72.4 | 69.5 | 65.7 | 59.4 | 68.7 | 70.8 | 67.7 | 68.4 | 74.0 | 74.4 | 71.1 | 61.9 | 68.2 | 67.4 | 65.1 | 67.3 | 69.3 | 74.4 | 59.4 |
| Status Indian women | 72.3 | | 74.3 | 78.5 | 76.0 | 76.2 | 73.3 | 66.1 | 75.9 | 74.0 | 75.1 | 74.5 | 77.4 | 78.0 | 76.1 | 70.0 | 75.9 | 74.2 | 67.7 | 74.7 | 75.0 | 78.5 | 66.1 |
| Status Indian total | 67.9 | | 73.3 | 73.9 | 74.3 | 72.8 | 69.7 | 62.8 | 72.0 | 72.5 | 71.5 | 71.4 | 75.7 | 76.5 | 73.5 | 65.8 | 72.1 | 71.1 | 66.3 | 71.2 | 72.1 | 76.5 | 62.8 |
| Other men | 76.9 | | 76.7 | 78.0 | 75.7 | 76.9 | 77.8 | 76.9 | 76.9 | 77.1 | 76.8 | 75.8 | 75.8 | 76.4 | 75.4 | 75.9 | 77.5 | 79.2 | 79.4 | 78.0 | 77.2 | 79.4 | 75.4 |
| Other women | 81.3 | | 81.3 | 82.3 | 80.7 | 81.1 | 81.7 | 81.1 | 81.3 | 81.5 | 80.8 | 79.9 | 80.5 | 81.0 | 80.2 | 82.2 | 82.1 | 82.6 | 83.5 | 81.8 | 81.7 | 83.5 | 79.9 |
| Other total | 79.1 | | 79.0 | 80.2 | 78.1 | 79.0 | 79.8 | 79.1 | 79.0 | 79.2 | 78.7 | 77.7 | 78.0 | 78.5 | 77.6 | 79.0 | 79.9 | 81.0 | 81.5 | 80.0 | 79.5 | 81.5 | 77.6 |
| Gap: Status Indians-Others (years) | | | | | | | | | | | | | | | | | | | | | | | |
| Men | 12.7 | | 5.2 | 8.6 | 3.3 | 7.4 | 12.1 | 17.5 | 8.2 | 6.3 | 9.1 | 7.4 | 1.8 | 2.0 | 4.3 | 14.0 | 9.3 | 11.8 | 14.3 | 10.7 | 7.9 | 1.8 | 17.5 |
| Women | 9.0 | | 7.0 | 3.8 | 4.7 | 4.9 | 8.4 | 15.0 | 5.4 | 7.5 | 5.7 | 5.4 | 3.1 | 3.0 | 4.1 | 12.2 | 6.2 | 8.4 | 15.8 | 7.1 | 6.7 | 3.0 | 15.8 |
| Sexes combined | 11.2 | | 5.7 | 6.3 | 3.8 | 6.2 | 10.1 | 16.3 | 7.0 | 6.7 | 7.2 | 6.3 | 2.3 | 2.0 | 4.1 | 13.2 | 7.8 | 9.9 | 15.2 | 8.8 | 7.4 | 2.0 | 16.3 |
| 2 Infant mortality rate | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | 10.5 | | 6.6 | 7.6 | 4.9 | 11.6 | 5.3 | 7.3 | 8.0 | 17.0 | 18.5 | 8.7 | 6.7 | 6.7 | 10.2 | 14.6 | 9.6 | • | 16.4 | 12.8 | 10.6 | 4.9 | 18.5 |
| Other residents | 5.6 | | 4.8 | 5.3 | 5.3 | 5.0 | 4.8 | 4.6 | 3.6 | 4.6 | 5.2 | 4.7 | 4.5 | 4.2 | 6.8 | 5.6 | 4.8 | 3.5 | 4.2 | 4.4 | 4.9 | 3.5 | 6.8 |
| Ratio: Status Indians/Others | 1.9 | | 1.4 | 1.4 | 0.9 | 2.3 | 1.1 | 1.6 | 2.2 | 3.7 | 3.6 | 1.9 | 1.9 | 1.6 | 1.5 | 2.6 | 2.0 | | 3.9 | 2.9 | 2.2 | 0.9 | 3.9 |
| 3 Mortality rates (ASMRs) | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | | | | | | | | | | | | | | | | | | | | | | | |
| Natural causes | 140.9 | | 65.0 | 93.1 | 67.7 | 81.8 | 205.4 | 385.8 | 83.4 | 78.7 | 96.6 | 64.7 | 65.1 | 67.6 | 72.9 | 136.7 | 300.4 | 91.2 | 287.0 | 107.0 | 85.8 | 64.7 | 385.8 |
| External causes | 22.8 | | 20.0 | 14.1 | 16.9 | 17.4 | 19.0 | 28.7 | 15.6 | 15.3 | 13.7 | 23.5 | 11.2 | 17.6 | 19.0 | 30.4 | 15.4 | 11.7 | 26.3 | 19.3 | 17.6 | 11.2 | 30.4 |
| All causes of death | 163.7 | | 85.0 | 107.2 | 84.6 | 99.2 | 224.4 | 414.5 | 99.0 | 94.0 | 110.3 | 88.2 | 76.3 | 85.2 | 91.9 | 167.1 | 315.8 | 102.9 | 313.3 | 126.3 | 103.3 | 76.3 | 414.5 |
| Other B.C. residents | | | | | | | | | | | | | | | | | | | | | | | |
| Natural causes | 64.6 | | 56.7 | 51.2 | 61.5 | 57.7 | 54.7 | 61.7 | 57.1 | 56.6 | 58.9 | 61.5 | 64.4 | 63.5 | 66.1 | 58.8 | 56.2 | 53.9 | 47.1 | 56.3 | 56.7 | 47.1 | 66.1 |
| External causes | 6.3 | | 6.0 | 5.0 | 7.3 | 5.2 | 4.1 | 4.4 | 6.0 | 5.4 | 6.1 | 7.4 | 6.8 | 6.3 | 6.7 | 5.9 | 3.9 | 3.4 | 2.9 | 4.4 | 5.1 | 2.9 | 7.4 |
| All causes of death | 70.9 | | 62.7 | 56.2 | 68.8 | 62.9 | 58.8 | 66.1 | 63.1 | 62.0 | [illegible] | 68.9 | 71.2 | 69.8 | 72.8 | 64.7 | 62.1 | 57.3 | 50.0 | 60.7 | 61.8 | 50.0 | 72.8 |
| Ratio: Status Indian/Others | | | | | | | | | | | | | | | | | | | | | | | |
| Natural causes | 2.2 | | 1.1 | 1.8 | 1.1 | 1.4 | 3.8 | 6.3 | 1.5 | 1.4 | 1.6 | 1.1 | 1.0 | 1.1 | 1.1 | 2.3 | 5.2 | 1.7 | 6.1 | 1.9 | 1.5 | | |
| External causes | 3.6 | | 3.3 | 2.8 | 2.3 | 3.3 | 4.6 | 6.5 | 2.6 | 2.8 | 2.2 | 3.2 | 1.6 | 2.8 | 2.8 | 5.2 | 3.9 | 3.4 | 9.1 | 4.4 | 3.4 | | |
| All causes of death | 2.3 | | 1.4 | 1.9 | 1.2 | 1.6 | 3.8 | 6.3 | 1.6 | 1.5 | 1.7 | 1.3 | 1.1 | 1.2 | 1.3 | 2.6 | 5.1 | 1.8 | 6.3 | 2.1 | 1.7 | | |
| 4 PYLL rates | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | | | | | | | | | | | | | | | | | | | | | | | |
| Natural causes | 97.1 | | 65.3 | 70.1 | 59.8 | 79.4 | 87.5 | 179.8 | 76.5 | 87.5 | 90.9 | 74.5 | 61.3 | 59.3 | 68.6 | 159.8 | 78.6 | 88.7 | 113.4 | 89.0 | 83.0 | 59.3 | 179.8 |
| External causes | 55.0 | | 59.4 | 45.1 | 58.8 | 58.9 | 68.5 | 61.9 | 47.9 | 56.8 | 52.0 | 68.7 | 36.7 | 50.7 | 69.0 | 110.0 | 31.3 | 47.7 | 55.1 | 63.1 | 58.3 | 31.3 | 110.0 |
| All causes of death | 152.1 | | 124.7 | 115.2 | 118.6 | 138.3 | 156.0 | 241.7 | 124.4 | 144.3 | 142.9 | 143.2 | 98.0 | 110.0 | 137.6 | 269.8 | 109.9 | 136.4 | 166.5 | 152.1 | 142.3 | 98.0 | 269.8 |
| Other B.C. residents | | | | | | | | | | | | | | | | | | | | | | | |
| Natural causes | 35.7 | | 37.0 | 34.6 | 40.7 | 38.5 | 35.6 | 38.7 | 35.7 | 38.2 | 36.7 | 37.0 | 38.4 | 37.1 | 42.0 | 46.7 | 36.2 | 28.9 | 28.6 | 36.8 | 37.8 | 28.6 | 46.7 |
| External causes | 20.8 | | 20.3 | 16.0 | 23.6 | 16.9 | 13.1 | 13.1 | 19.4 | 17.3 | 21.1 | 24.0 | 20.7 | 18.9 | 20.8 | 17.7 | 11.8 | 9.3 | 8.0 | 12.4 | 15.8 | 8.0 | 24.0 |
| All causes of death | 56.5 | | 57.3 | 50.6 | 64.3 | 55.4 | 48.7 | 51.8 | 55.1 | 55.5 | 57.8 | 61.0 | 59.1 | 56.0 | 62.8 | 64.4 | 48.0 | 38.2 | 36.6 | 49.2 | 53.6 | 36.6 | 64.4 |
| Ratio: Status Indian/Others | | | | | | | | | | | | | | | | | | | | | | | |
| Natural causes | 2.7 | | 1.8 | 2.0 | 1.5 | 2.1 | 2.5 | 4.6 | 2.1 | 2.3 | 2.5 | 2.0 | 1.6 | 1.6 | 1.6 | 3.4 | 2.2 | 3.1 | 4.0 | 2.4 | 2.2 | | |
| External causes | 2.6 | | 2.9 | 2.8 | 2.5 | 3.5 | 5.2 | 4.7 | 2.5 | 3.3 | 2.5 | 2.9 | 1.8 | 2.7 | 3.3 | 6.2 | 2.7 | 5.1 | 6.9 | 5.1 | 3.8 | | |
| *All causes of death* | *2.7* | | *2.2* | 2.3 | 1.8 | 2.5 | 3.2 | 4.7 | 2.3 | 2.6 | 2.5 | 2.3 | 1.7 | 2.0 | 2.2 | 4.2 | 2.3 | 3.6 | 4.6 | 3.1 | 2.7 | | |
| **COMMUNITY ENVIRONMENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| 5 Population estimates | | | | | | | | | | | | | | | | | | | | | | | |
| Aboriginal identity, 1996 Census | | | | | | | | | | | | | | | | | | | | | | | |
| On-reserve | 515 | - | 1,075 | 995 | 5,150 | 3,000 | 415 | 185 | 1,190 | 5,335 | 4,175 | 3,095 | 9,745 | 1,220 | 3,640 | 495 | - | 990 | - | 1,235 | [illegible] | | |
| Off-reserve | 2,280 | 1,505 | 2,520 | 3,825 | 6,450 | 6,010 | 7,760 | 5,000 | 1,710 | 8,240 | 3,945 | 3,935 | 9,655 | 4,555 | 7,825 | 11,140 | 2,495 | 1,450 | 1,215 | 5,685 | 87,205 | | |
| Total Aboriginal | 2,795 | 1,505 | 3,600 | 4,825 | 11,595 | 9,010 | 8,175 | 5,185 | 2,900 | 13,575 | 8,115 | 7,030 | 19,395 | 5,775 | 11,465 | 11,640 | 2,495 | 2,445 | 1,210 | 6,925 | [illegible] | | |
| Total regional pop 1996 | 76085 | 78610 | 109890 | 212480 | 125325 | 222305 | 521220 | 290185 | 69125 | 224785 | 114025 | 69715 | 86545 | 62055 | 123840 | 522230 | 179210 | 169965 | 148865 | 317985 | [illegible] | | |
| Per cent Aboriginal | 3.7% | 1.9% | 3.3% | 2.3% | 9.3% | 4.1% | 1.6% | 1.8% | 4.2% | 6.0% | 7.1% | 10.1% | 22.4% | 9.3% | 9.3% | 2.2% | 1.4% | 1.4% | 0.8% | 2.2% | 3.7% | | |
| Aboriginal identity, 1996 Census | | | | | | | | | | | | | | | | | | | | | | | |
| SR = single response | | | | | | | | | | | | | | | | | | | | | | | |
| North American Indian SR | 1,720 | 850 | 2,415 | 3,190 | 9,755 | 7,030 | 4,970 | 3,210 | 2,410 | 10,930 | 6,985 | 5,790 | 17,870 | 3,430 | 8,695 | 8,580 | 1,625 | 2,075 | 825 | 5,010 | 107,375 | | |
| Metis single response | 1,000 | 620 | 950 | 1,485 | 1,355 | 1,600 | 2,800 | 1,730 | 340 | 2,015 | 815 | 925 | 565 | 2,000 | 2,120 | 2,385 | 705 | 255 | 295 | 1,630 | [illegible] | | |
| Inuit single response | 20 | 25 | 30 | 30 | 40 | 25 | 70 | 35 | 30 | 45 | 20 | 40 | 35 | 100 | 65 | 85 | 15 | 10 | 10 | 40 | 740 | | |
| Multiple Aboriginal responses | 15 | 0 | 105 | 15 | 95 | 65 | 140 | 50 | 15 | 160 | 40 | 35 | 25 | 60 | 115 | 125 | 40 | 35 | 40 | 25 | [illegible] | | |
| Other Aboriginal response | 40 | 10 | 95 | 105 | 380 | 285 | 185 | 160 | 105 | 425 | 250 | 240 | 905 | 180 | 470 | 505 | 110 | 60 | 40 | 215 | 4,785 | | |
| Total Aboriginal | 2,795 | 1,505 | 3,600 | 4,820 | 11,595 | 9,005 | 8,170 | 5,185 | 2,900 | 13,575 | 8,120 | 7,025 | 19,400 | 5,775 | 11,465 | 11,640 | 2,495 | 2,445 | 1,215 | 6,920 | [illegible] | | |
| Aboriginal origin, 1996 Census | 4,360 | 2,925 | 5,555 | 8,150 | 13,905 | 11,525 | 13,975 | 8,445 | 4,090 | 16,840 | 10,070 | 8,495 | 19,830 | 6,750 | 13,705 | 15,000 | 3,850 | 3,570 | 1,975 | 11,415 | [illegible] | | |
| Status Indians, 1999 | 2,369 | | 3,442 | 4,982 | 13,658 | 9,385 | 5,058 | 3,121 | 4,638 | 15,756 | 9,446 | 7,831 | 24,372 | 4,700 | 12,038 | 12,336 | 2,946 | 2,922 | 711 | 7,518 | [illegible] | | |
| 6 Educational attainment | | | | | | | | | | | | | | | | | | | | | | | |
| High school graduation | 55% | 58% | 55% | 54% | 54% | 51% | 59% | 62% | 53% | 46% | 46% | 42% | 45% | 39% | 39% | 59% | 61% | 62% | 71% | 58% | 51% | 71% | 39% |
| 7 Educational attainment | | | | | | | | | | | | | | | | | | | | | | | |
| Post-secondary graduation | 34% | 32% | 29% | 30% | 28% | 26% | 33% | 35% | 34% | 25% | 24% | 22% | 23% | 21% | 18% | 33% | 33% | 31% | 43% | 33% | 27% | 43% | 18% |
| 8 Employment rate | | | | | | | | | | | | | | | | | | | | | | | |
| Men age 15+ | 76% | 83% | 70% | 72% | 69% | 75% | 84% | 83% | 78% | 74% | 66% | 70% | 62% | 70% | 67% | 68% | 83% | 77% | 96% | 81% | 72% | 96% | 62% |
| Women age 15+ | 74% | 86% | 79% | 77% | 75% | 74% | 85% | 83% | 78% | 79% | 76% | 81% | 73% | 78% | 74% | 75% | 80% | 88% | 90% | 82% | [illegible] | 90% | 73% |
| Total age 15+ | 76% | 84% | 75% | 75% | 72% | 74% | 85% | 83% | 78% | 77% | 70% | 76% | 67% | 74% | 70% | 71% | 82% | 83% | 92% | 81% | [illegible] | 92% | 67% |

| Health Indicators Regional Data | East Kootenay | West Kootenay | North Okanagan | Okanagan Similkameen | Thompson | Fraser Valley | South Fraser Valley | Simon Fraser | Coast Garibaldi | Central Vancouver Island | Upper Island/ Central Coast | Cariboo | North West | Peace Liard | Northern Interior | Vancouver | Burnaby | North Shore | Richmond | Capital | British Columbia | Best Rate | Worst Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Men 15-24 | 73% | 80% | 66% | 73% | 57% | 66% | 78% | 87% | 84% | 64% | 56% | 66% | 52% | 68% | 57% | 59% | 90% | 67% | 71% | 77% | 65% | 90% | 52% |
| Women 15-24 | 67% | 81% | 79% | 76% | 66% | 63% | 86% | 76% | 63% | 69% | 54% | 80% | 65% | 81% | 70% | 67% | 83% | 87% | 75% | 71% | 71% | 87% | 54% |
| Total age 15-24 | 70% | 81% | 69% | 73% | 60% | 65% | 82% | 81% | 75% | 66% | 56% | 73% | 58% | 75% | 63% | 63% | 87% | 76% | 74% | 73% | 68% | 87% | 56% |
| 9 Employment to population ratio | | | | | | | | | | | | | | | | | | | | | | | |
| Age 15+ | 53% | 55% | 46% | 47% | 44% | 44% | 58% | 59% | 50% | 42% | 46% | 45% | 43% | 47% | 42% | 40% | 55% | 52% | 63% | 49% | 48% | 63% | 40% |
| 10 Income <$10,000 | | | | | | | | | | | | | | | | | | | | | | | |
| Men age 15+ | 35% | 27% | 45% | 38% | 47% | 42% | 33% | 30% | 42% | 49% | 41% | 42% | 40% | 37% | 41% | 53% | 33% | 46% | 29% | 42% | 42% | 27% | 53% |
| Women age 15+ | 45% | 45% | 50% | 39% | 50% | 46% | 37% | 38% | 54% | 52% | 46% | 53% | 46% | 52% | 50% | 45% | 34% | 38% | 31% | 39% | 46% | 31% | 54% |
| Total age 15+ | 40% | 37% | 48% | 39% | 49% | 44% | 35% | 34% | 48% | 51% | 43% | 48% | 43% | 45% | 46% | 49% | 34% | 42% | 30% | 40% | 44% | 30% | 51% |
| 11 Average employment income Full-year full-time workers | | | | | | | | | | | | | | | | | | | | | | | |
| Men age 15+ ($) | 42328 | 42090 | 32389 | 28977 | 34089 | 33380 | 39602 | 36101 | 37443 | 31392 | 35871 | 35697 | 37837 | 40917 | 36323 | 31734 | 35390 | 38227 | 39386 | 29566 | 35384 | 42328 | 28977 |
| Women age 15+ ($) | 18935 | 26297 | 25839 | 23841 | 24952 | 26046 | 28593 | 28147 | 19590 | 23407 | 23583 | 22866 | 25975 | 22677 | 26385 | 28068 | 29879 | 27139 | 35997 | 29187 | 26031 | 35997 | 18935 |
| 12 Composition of total income | | | | | | | | | | | | | | | | | | | | | | | |
| Employment | 75.4% | 70.7% | 64.1% | 65.5% | 72.0% | 70.0% | 77.5% | 78.8% | 68.8% | 67.8% | 71.9% | 73.1% | 73.9% | 74.5% | 72.2% | 63.5% | 78.2% | 75.9% | 78.7% | 70.7% | 71.8% | 78.8% | 63.5% |
| Govt transfer payments | 19.9% | 23.5% | 29.7% | 29.8% | 23.8% | 25.7% | 18.2% | 16.8% | 26.6% | 28.4% | 24.1% | 25.4% | 24.0% | 23.0% | 24.8% | 29.7% | 19.3% | 16.7% | 16.0% | 23.5% | 24.2% | 16.0% | 29.8% |
| Other | 4.7% | 5.8% | 6.2% | 4.7% | 4.2% | 4.3% | 4.3% | 4.4% | 4.6% | 3.8% | 4.0% | 1.5% | 2.1% | 2.5% | 2.9% | 6.8% | 2.4% | 7.4% | 5.4% | 5.8% | 4.1% | | |
| 13 Disparity: Aboriginal rates as a % of non-Aboriginal within each region | | | | | | | | | | | | | | | | | | | | | | | |
| Employment | 87.8% | 96.6% | 84.1% | 84.4% | 76.6% | 78.6% | 92.4% | 90.1% | 82.8% | 81.2% | 76.8% | 80.0% | 68.8% | 73.5% | 70.6% | 73.0% | 92.3% | 83.4% | 103.7% | 85.2% | 79.1% | 104% | 69% |
| Income | 86.5% | 93.5% | 88.6% | 81.5% | 84.0% | 87.6% | 90.2% | 85.9% | 77.8% | 80.5% | 84.3% | 83.4% | 81.1% | 85.6% | 81.5% | 78.5% | 89.6% | 73.9% | 99.1% | 83.0% | 82.8% | 99% | 74% |
| Education | 90.9% | 87.7% | 89.0% | 85.5% | 86.2% | 82.4% | 90.8% | 88.8% | 82.7% | 69.5% | 69.8% | 71.4% | 68.6% | 63.1% | 58.7% | 80.4% | 86.4% | 69.8% | 104.6% | 78.8% | 73.3% | 105% | 59% |
| Average for 7 measures | 88.1% | 92.7% | 87.4% | 83.4% | 82.5% | 83.6% | 91.0% | 87.9% | 80.6% | 77.5% | 78.0% | 79.0% | 74.0% | 75.7% | 71.9% | 77.5% | 89.5% | 75.4% | 102.0% | 82.4% | 79.0% | 102% | 72% |
| Rank (1 = least disparity) | 5 | 2 | 7 | 9 | 10 | 8 | 3 | 6 | 12 | 15 | 14 | 13 | 19 | 17 | 20 | 16 | 4 | 18 | 1 | 11 | | 1 | 20 |
| 14 Children in care, March 2002 | | | | | | | | | | | | | | | | | | | | | | | |
| Aboriginal children | 70 | 29 | 99 | 169 | 286 | 381 | 300 | 147 | 135 | 458 | 147 | 220 | 322 | 163 | 379 | 687 | 47 | 37 | 2 | 229 | 4307 | | |
| Non-Aboriginal children | 145 | 112 | 274 | 430 | 273 | 558 | 872 | 542 | 90 | 438 | 196 | 111 | 69 | 81 | 152 | 567 | 108 | 113 | 20 | 601 | 5776 | | |
| Total children in care | 215 | 141 | 373 | 599 | 559 | 939 | 1172 | 689 | 225 | 896 | 343 | 331 | 391 | 244 | 531 | 1254 | 155 | 150 | 22 | 830 | 10083 | | |
| Aboriginal children as % of children in care | 32.6% | 20.6% | 26.5% | 28.2% | 51.2% | 40.6% | 25.6% | 21.3% | 60.0% | 51.1% | 42.9% | 66.5% | 82.4% | 66.8% | 71.4% | 54.8% | 30.3% | 24.7% | 9.1% | 27.6% | 42.7% | | |
| Aboriginal children | | | | | | | | | | | | | | | | | | | | | | | |
| Number in care, Mar 2002 | 70 | 29 | 99 | 169 | 286 | 381 | 300 | 147 | 135 | 458 | 147 | 220 | 322 | 163 | 379 | 687 | 47 | 37 | 2 | 229 | 4,307 | | |
| Est'd Aboriginal pop 0-18 | 2355 | 1484 | 2625 | 3669 | 6455 | 6060 | 8019 | 4066 | 1951 | 7879 | 4614 | 3712 | 8115 | 3604 | 6281 | 4178 | 1135 | 1367 | 795 | 5029 | 83385 | | |
| Estimated % in care | 3.0% | 2.0% | 3.8% | 4.6% | 4.4% | 6.3% | 3.7% | 3.6% | 6.9% | 5.8% | 3.2% | 5.9% | 4.0% | 4.5% | 6.0% | 16.4% | 4.1% | 2.7% | 0.3% | 4.6% | 5.2% | 0.3% | 16.4% |
| Non-Aboriginal children | | | | | | | | | | | | | | | | | | | | | | | |
| Number in care, Mar 2002 | 145 | 112 | 274 | 430 | 273 | 558 | 872 | 542 | 90 | 438 | 196 | 111 | 69 | 81 | 152 | 567 | 108 | 113 | 20 | 601 | 5776 | | |
| Est'd Aboriginal pop 0-18 | 18021 | 17399 | 25776 | 48126 | 27445 | 60661 | 143045 | 75155 | 16461 | 49317 | 26500 | 17415 | 19272 | 17145 | 31424 | 96121 | 37597 | 36295 | 34443 | 61067 | 858883 | | |
| Estimated % in care | 0.8% | 0.6% | 1.1% | 0.9% | 1.0% | 0.9% | 0.6% | 0.7% | 0.5% | 0.9% | 0.7% | 0.6% | 0.4% | 0.5% | 0.5% | 0.6% | 0.3% | 0.3% | 0.1% | 1.0% | 0.7% | 0.1% | 1.1% |
| **HEALTHY GROWTH AND DEVELOPMENT** | | | | | | | | | | | | | | | | | | | | | | | |
| 15 Teen pregnancy (age 15-19) | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians, 1999 | | | | | | | | | | | | | | | | | | | | | | | |
| Est'd number of pregnancies | 12 | | 17 | 30 | 45 | 65 | 28 | 17 | 24 | 107 | 52 | 43 | 103 | 34 | 53 | 50 | 14 | 14 | 2 | 37 | 752 | | |
| Rate per 1,000 women | 137.9 | | 146.6 | 163.0 | 84.7 | 163.3 | 169.7 | 195.4 | 134.1 | 154.0 | 144.4 | 122.9 | 109.2 | 223.7 | 101.0 | 134.0 | 119.7 | 108.5 | 166.7 | 117.5 | 131.2 | 84.7 | 223.7 |
| Other B.C. residents, 1999 | | | | | | | | | | | | | | | | | | | | | | | |
| Est'd number of pregnancies | 183 | | 110 | 234 | 131 | 320 | 673 | 352 | 83 | 308 | 171 | 110 | 80 | 117 | 166 | 462 | 188 | 104 | 135 | 369 | 4,380 | | |
| Rate per 1,000 women | 29.8 | | 25.9 | 33.4 | 29.6 | 39.7 | 36.1 | 34.8 | 33.3 | 40.3 | 40.9 | 39.5 | 30.2 | 48.8 | 35.0 | 33.4 | 35.0 | 19.5 | 24.0 | 40.2 | 35.1 | 19.5 | 48.8 |
| Ratio: Status Indian/Others | 4.6 | | 5.7 | 4.9 | 2.9 | 4.1 | 4.7 | 5.6 | 4.0 | 3.8 | 3.5 | 3.1 | 3.6 | 4.6 | 2.9 | 4.0 | 3.4 | 5.6 | 6.9 | 2.9 | 3.7 | | |
| 16 Pre-term births | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | 5.9% | | 5.4% | 6.4% | 8.8% | 6.1% | 7.1% | 9.0% | 7.9% | 11.1% | 11.2% | 7.4% | 7.8% | 6.6% | 8.5% | 11.9% | 10.1% | 8.7% | 7.7% | 9.9% | 8.9% | 5.4% | 11.9% |
| Other B.C. residents | 4.7% | | 5.1% | 6.3% | 6.1% | 5.4% | 6.5% | 6.2% | 5.5% | 5.8% | 5.6% | 5.9% | 6.0% | 4.6% | 6.1% | 6.9% | 6.6% | 5.6% | 6.1% | 6.1% | 6.1% | 4.6% | 6.9% |
| Ratio: Status Indian/Others | 1.3 | | 1.1 | 1.0 | 1.4 | 1.1 | 1.1 | 1.5 | 1.4 | 1.9 | 2.0 | 1.2 | 1.3 | 1.4 | 1.4 | 1.7 | 1.5 | 1.5 | 1.3 | 1.6 | 1.5 | | |
| 17 Low Birth Weight | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | 4.0% | | 3.5% | 4.7% | 6.3% | 6.1% | 4.3% | 6.2% | 4.4% | 5.8% | 6.0% | 5.6% | 4.5% | 5.0% | 5.8% | 7.4% | 7.3% | 5.0% | 4.4% | 6.1% | 5.6% | 3.5% | 7.4% |
| Other B.C. residents | 4.4% | | 4.2% | 5.3% | 5.1% | 4.6% | 5.4% | 4.9% | 4.7% | 4.5% | 4.8% | 5.3% | 4.8% | 3.8% | 5.1% | 5.6% | 5.4% | 4.2% | 4.8% | 4.8% | 5.0% | 3.8% | 5.6% |
| Ratio: Status Indian/Others | 0.9 | | 0.8 | 0.9 | 1.2 | 1.3 | 0.8 | 1.3 | 0.9 | 1.3 | 1.3 | 1.1 | 0.9 | 1.3 | 1.1 | 1.3 | 1.4 | 1.2 | 0.9 | 1.3 | 1.1 | | |
| 18 Post-neonatal mortality | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | 6.3 | | 4.9 | 5.4 | 2.9 | 8.3 | 3.8 | 7.3 | 4.0 | 11.6 | 13.5 | 5.4 | 4.7 | 3.8 | 7.5 | 8.9 | 1.9 | 4.4 | 5.5 | 8.1 | 6.9 | 1.9 | 13.5 |
| Other B.C. residents | 2.2 | | 1.7 | 1.7 | 1.9 | 2.1 | 1.4 | 1.0 | 1.0 | 1.9 | 1.5 | 1.9 | 1.2 | 1.4 | 2.3 | 1.3 | 1.1 | 1.2 | 1.1 | 1.6 | 1.5 | 1.0 | 2.3 |
| Ratio: Status Indian/Others | 2.9 | | 2.9 | 3.2 | 1.5 | 4.0 | 2.7 | 7.3 | 4.0 | 6.1 | 9.0 | 2.8 | 3.9 | 2.7 | 3.3 | 6.8 | 1.7 | 3.7 | 5.0 | 5.1 | 4.6 | | |
| **PHYSICAL ENVIRONMENT** | | | | | | | | | | | | | | | | | | | | | | | |
| 19 Housing quality on reserve | | | | | | | | | | | | | | | | | | | | | | | |
| Units in adequate condition | [illegible] | | 278 | 328 | 1,277 | 645 | 31 | 78 | 255 | 514 | 941 | 640 | 1,932 | 315 | 726 | 98 | - | 438 | - | 308 | 8,965 | | |
| Total housing units | [illegible] | | 388 | 518 | 2,039 | 1,192 | 91 | 94 | 589 | 1,117 | 1,602 | 1,345 | 3,516 | 748 | 1,336 | 156 | - | 491 | - | 540 | 16,025 | | |
| Per cent adequate | [illegible] | | 72% | 63% | 63% | 54% | 34% | 83% | 43% | 46% | 59% | 48% | 55% | 42% | 54% | 63% | - | 89% | - | 57% | 56% | 89% | 34% |

| Health Indicators Regional Data | East Kootenay | West Kootenay | North Okanagan | Okanagan Similkameen | Thompson | Fraser Valley | South Fraser Valley | Simon Fraser | Coast Garibaldi | Central Vancouver Island | Upper Island/ Central Coast | Cariboo | North West | Peace Liard | Northern Interior | Vancouver | Burnaby | North Shore | Richmond | Capital | British Columbia | Best Rate | Worst Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **HEALTH STATUS** | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Life expectancy at birth (years) | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indian men | 64.2 | | 71.5 | 69.4 | 72.4 | 69.5 | 65.7 | 59.4 | 68.7 | 70.8 | 67.7 | 68.4 | 74.0 | 74.4 | 71.1 | 61.9 | 68.2 | 67.4 | 65.1 | 67.3 | **69.3** | 74.4 | 59.4 |
| Status Indian women | 72.3 | | 74.3 | 78.5 | 76.0 | 76.2 | 73.3 | 66.1 | 75.9 | 74.0 | 75.1 | 74.5 | 77.4 | 78.0 | 76.1 | 70.0 | 75.9 | 74.2 | 67.7 | 74.7 | **75.0** | 78.5 | 66.1 |
| Status Indian total | 67.9 | | 73.3 | 73.9 | 74.3 | 72.8 | 69.7 | 62.8 | 72.0 | 72.5 | 71.5 | 71.4 | 75.7 | 76.5 | 73.5 | 65.8 | 72.1 | 71.1 | 66.3 | 71.2 | **72.1** | 76.5 | 62.8 |
| Other men | 76.9 | | 76.7 | 78.0 | 75.7 | 76.9 | 77.8 | 76.9 | 76.9 | 77.1 | 76.8 | 75.8 | 75.8 | 76.4 | 75.4 | 75.9 | 77.5 | 79.2 | 79.4 | 78.0 | **77.2** | 79.4 | 75.4 |
| Other women | 81.3 | | 81.3 | 82.3 | 80.7 | 81.1 | 81.7 | 81.1 | 81.3 | 81.5 | 80.8 | 79.9 | 80.5 | 81.0 | 80.2 | 82.2 | 82.1 | 82.6 | 83.5 | 81.8 | **81.7** | 83.5 | 79.9 |
| Other total | 79.1 | | 79.0 | 80.2 | 78.1 | 79.0 | 79.8 | 79.1 | 79.0 | 79.2 | 78.7 | 77.7 | 78.0 | 78.5 | 77.6 | 79.0 | 79.9 | 81.0 | 81.5 | 80.0 | **79.5** | 81.5 | 77.6 |
| Gap: Status Indians-Others (years) | | | | | | | | | | | | | | | | | | | | | | | |
| Men | 12.7 | | 5.2 | 8.6 | 3.3 | 7.4 | 12.1 | 17.5 | 8.2 | 6.3 | 9.1 | 7.4 | 1.8 | 2.0 | 4.3 | 14.0 | 9.3 | 11.8 | 14.3 | 10.7 | **7.9** | 1.8 | 17.5 |
| Women | 9.0 | | 7.0 | 3.8 | 4.7 | 4.9 | 8.4 | 15.0 | 5.4 | 7.5 | 5.7 | 5.4 | 3.1 | 3.0 | 4.1 | 12.2 | 6.2 | 8.4 | 15.8 | 7.1 | **6.7** | 3.0 | 15.8 |
| Sexes combined | 11.2 | | 5.7 | 6.3 | 3.8 | 6.2 | 10.1 | 16.3 | 7.0 | 6.7 | 7.2 | 6.3 | 2.3 | 2.0 | 4.1 | 13.2 | 7.8 | 9.9 | 15.2 | 8.8 | **7.4** | 2.0 | 16.3 |
| 2 Infant mortality rate | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | 10.5 | | 6.6 | 7.6 | 4.9 | 11.6 | 5.3 | 7.3 | 8.0 | 17.0 | 18.5 | 8.7 | 8.7 | 6.7 | 10.2 | 14.[illegible] | 9.6 | * | 16.4 | 12.8 | **10.6** | 4.9 | 18.5 |
| Other residents | 5.6 | | 4.8 | 5.3 | 5.3 | 5.0 | 4.8 | 4.6 | 3.6 | 4.6 | 5.2 | 4.7 | 4.5 | 4.2 | 6.8 | 5.6 | 4.8 | 3.5 | 4.2 | 4.4 | **4.9** | 3.5 | 6.8 |
| Ratio: Status Indians/Others | 1.9 | | 1.4 | 1.4 | 0.9 | 2.3 | 1.1 | 1.6 | 2.2 | 3.7 | 3.6 | 1.9 | 1.9 | 1.6 | 1.5 | 2.6 | 2.0 | | 3.9 | 2.9 | **2.2** | 0.9 | 3.9 |
| 3 Mortality rates (ASMRs) | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | | | | | | | | | | | | | | | | | | | | | | | |
| Natural causes | 140.9 | | 65.0 | 93.1 | 67.7 | 61.8 | 205.4 | 385.8 | 83.4 | 78.7 | 96.6 | 64.7 | 65.1 | 67.6 | 72.9 | 136.7 | 300.4 | 91.2 | 287.0 | 107.0 | **85.8** | 64.7 | 385.8 |
| External causes | 22.8 | | 20.0 | 14.1 | 16.9 | 17.4 | 19.0 | 28.7 | 15.6 | 15.3 | 13.7 | 23.5 | 11.2 | 17.6 | 19.0 | 30.4 | 15.4 | 11.7 | 26.3 | 19.3 | **17.5** | 11.2 | 30.4 |
| All causes of death | 163.7 | | 85.0 | 107.2 | 84.6 | 99.2 | 224.4 | 414.5 | 99.0 | 94.0 | 110.3 | 88.2 | 76.3 | 85.2 | 91.9 | 167.1 | 315.8 | 102.9 | 313.3 | 126.3 | **103.3** | 76.3 | 414.5 |
| Other B.C. residents | | | | | | | | | | | | | | | | | | | | | | | |
| Natural causes | 64.6 | | 56.7 | 51.2 | 61.5 | 57.7 | 54.7 | 61.7 | 57.1 | 56.6 | 58.9 | 61.5 | 64.4 | 63.5 | 66.1 | 58.8 | 58.2 | 53.9 | 47.1 | 56.3 | **56.7** | 47.1 | 66.1 |
| External causes | 6.3 | | 6.0 | 5.0 | 7.3 | 5.2 | 4.1 | 4.4 | 6.0 | 5.4 | 6.1 | 7.4 | 6.8 | 6.3 | 6.7 | 5.9 | 3.9 | 3.4 | 2.9 | 4.4 | **5.1** | 2.9 | 7.4 |
| All causes of death | 70.9 | | 62.7 | 56.2 | 68.8 | 62.9 | 58.8 | 66.1 | 63.1 | 62.0 | 65.0 | 68.9 | 71.2 | 69.8 | 72.8 | 64.7 | 62.1 | 57.3 | 50.0 | 60.7 | **61.8** | 50.0 | 72.8 |
| Ratio: Status Indian/Others | | | | | | | | | | | | | | | | | | | | | | | |
| Natural causes | 2.2 | | 1.1 | 1.8 | 1.1 | 1.4 | 3.8 | 6.3 | 1.5 | 1.4 | 1.6 | 1.1 | 1.0 | 1.1 | 1.1 | 2.3 | 5.2 | 1.7 | 6.1 | 1.9 | **1.5** | | |
| External causes | 3.6 | | 3.3 | 2.8 | 2.3 | 3.3 | 4.6 | 6.5 | 2.6 | 2.8 | 2.2 | 3.2 | 1.6 | 2.8 | 2.8 | 5.2 | 3.9 | 3.4 | 9.1 | 4.4 | **3.4** | | |
| All causes of death | 2.3 | | 1.4 | 1.9 | 1.2 | 1.6 | 3.8 | 6.3 | 1.6 | 1.5 | 1.7 | 1.3 | 1.1 | 1.2 | 1.3 | 2.6 | 5.1 | 1.8 | 6.3 | 2.1 | **1.7** | | |
| 4 PYLL rates | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | | | | | | | | | | | | | | | | | | | | | | | |
| Natural causes | 97.1 | | 65.3 | 70.1 | 59.8 | 79.4 | 87.5 | 179.8 | 76.5 | 87.5 | 90.9 | 74.5 | 61.3 | 59.3 | 68.6 | 159.8 | 78.6 | 88.7 | 113.4 | 89.0 | **83.0** | 59.3 | 179.8 |
| External causes | 55.0 | | 59.4 | 45.1 | 58.8 | 58.9 | 68.5 | 61.9 | 47.9 | 56.8 | 52.0 | 68.7 | 36.7 | 50.7 | 69.0 | 110.0 | 31.3 | 47.7 | 55.1 | 63.1 | **59.3** | 31.3 | 110.0 |
| All causes of death | 152.1 | | 124.7 | 115.2 | 118.6 | 138.3 | 156.0 | 241.7 | 124.4 | 144.3 | 142.9 | 143.2 | 98.0 | 110.0 | 137.6 | 269.8 | 109.9 | 136.4 | 168.5 | 152.1 | **142.3** | 98.0 | 269.8 |
| Other B.C. residents | | | | | | | | | | | | | | | | | | | | | | | |
| Natural causes | 35.7 | | 37.0 | 34.6 | 40.7 | 38.5 | 35.6 | 38.7 | 35.7 | 38.2 | 36.7 | 37.0 | 38.4 | 37.1 | 42.0 | 46.7 | 36.2 | 28.9 | 28.6 | 36.8 | **37.8** | 28.6 | 46.7 |
| External causes | 20.8 | | 20.3 | 16.0 | 23.6 | 16.9 | 13.1 | 13.1 | 19.4 | 17.3 | 21.1 | 24.0 | 20.7 | 18.9 | 20.8 | 17.7 | 11.8 | 9.3 | 8.0 | 12.4 | **15.8** | 8.0 | 24.0 |
| All causes of death | 56.5 | | 57.3 | 50.6 | 64.3 | 55.4 | 48.7 | 51.8 | 55.1 | 55.5 | 57.8 | 61.0 | 59.1 | 56.0 | 62.8 | 64.4 | 48.0 | 38.2 | 36.6 | 49.2 | **53.6** | 36.6 | 64.4 |
| Ratio: Status Indian/Others | | | | | | | | | | | | | | | | | | | | | | | |
| Natural causes | 2.7 | | 1.8 | 2.0 | 1.5 | 2.1 | 2.5 | 4.6 | 2.1 | 2.3 | 2.5 | 2.0 | 1.6 | 1.6 | 1.6 | 3.4 | 2.2 | 3.1 | 4.0 | 2.4 | **2.2** | | |
| External causes | 2.6 | | 2.9 | 2.8 | 2.5 | 3.5 | 5.2 | 4.7 | 2.5 | 3.3 | 2.5 | 2.9 | 1.8 | 2.7 | 3.3 | 6.2 | 2.7 | 5.1 | 6.9 | 5.1 | **3.8** | | |
| All causes of death | 2.7 | | 2.2 | 2.3 | 1.8 | 2.5 | 3.2 | 4.7 | 2.3 | 2.6 | 2.5 | 2.3 | 1.7 | 2.0 | 2.2 | 4.2 | 2.3 | 3.6 | 4.6 | 3.1 | **2.7** | | |
| **COMMUNITY ENVIRONMENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| 5 Population estimates | | | | | | | | | | | | | | | | | | | | | | | |
| Aboriginal identity, 1996 Census | | | | | | | | | | | | | | | | | | | | | | | |
| On-reserve | 515 | - | 1,075 | 995 | 5,150 | 3,000 | 415 | 185 | 1,190 | 5,335 | 4,175 | 3,095 | 9,745 | 1,220 | 3,640 | 495 | - | 990 | - | 1,235 | **42,455** | | |
| Off-reserve | 2,280 | 1,505 | 2,520 | 3,825 | 6,450 | 6,010 | 7,760 | 5,000 | 1,710 | 8,240 | 3,945 | 3,935 | 9,655 | 4,555 | 7,825 | 11,140 | 2,495 | 1,450 | 1,215 | 5,685 | **97,205** | | |
| Total Aboriginal | 2,795 | 1,505 | 3,600 | 4,825 | 11,595 | 9,010 | 8,175 | 5,185 | 2,900 | 13,575 | 8,115 | 7,030 | 19,395 | 5,775 | 11,465 | 11,640 | 2,495 | 2,445 | 1,210 | 6,925 | **139,655** | | |
| Total regional pop 1996 | 76085 | 78610 | 109890 | 212480 | 125325 | 222305 | 521220 | 290185 | 69125 | 224785 | 114025 | 69715 | 86545 | 62055 | 123840 | 522230 | 179210 | 169965 | 148865 | 317985 | **3724500** | | |
| Per cent Aboriginal | 3.7% | 1.9% | 3.3% | 2.3% | 9.3% | 4.1% | 1.6% | 1.8% | 4.2% | 6.0% | 7.1% | 10.1% | 22.4% | 9.3% | 9.3% | 2.2% | 1.4% | 1.4% | 0.8% | 2.2% | **3.7%** | | |
| Aboriginal identity, 1996 Census | | | | | | | | | | | | | | | | | | | | | | | |
| SR = single response | | | | | | | | | | | | | | | | | | | | | | | |
| North American Indian SR | 1,720 | 850 | 2,415 | 3,190 | 9,755 | 7,030 | 4,970 | 3,210 | 2,410 | 10,930 | 6,985 | 5,790 | 17,870 | 3,430 | 8,695 | 8,580 | 1,625 | 2,075 | 825 | 5,010 | **107,375** | | |
| Metis single response | 1,000 | 620 | 950 | 1,485 | 1,355 | 1,600 | 2,800 | 1,730 | 340 | 2,015 | 815 | 925 | 565 | 2,000 | 2,120 | 2,365 | 705 | 255 | 295 | 1,630 | **25,575** | | |
| Inuit single response | 20 | 25 | 30 | 30 | 40 | 25 | 70 | 35 | 30 | 45 | 20 | 40 | 35 | 100 | 65 | 65 | 15 | 10 | 10 | 40 | **740** | | |
| Multiple Aboriginal responses | 15 | 0 | 105 | 15 | 95 | 65 | 140 | 50 | 15 | 160 | 40 | 35 | 25 | 60 | 115 | 125 | 40 | 35 | 40 | 25 | **1,200** | | |
| Other Aboriginal response | 40 | 10 | 95 | 105 | 360 | 285 | 185 | 160 | 105 | 425 | 250 | 240 | 905 | 180 | 470 | 505 | 110 | 60 | 40 | 215 | **4,785** | | |
| Total Aboriginal | 2,795 | 1,505 | 3,600 | 4,820 | 11,595 | 9,005 | 8,170 | 5,185 | 2,900 | 13,575 | 8,120 | 7,025 | 19,400 | 5,775 | 11,465 | 11,640 | 2,495 | 2,445 | 1,215 | 6,920 | **139,655** | | |
| Aboriginal origin, 1996 Census | 4,360 | 2,925 | 5,555 | 8,150 | 13,905 | 11,525 | 13,975 | 8,445 | 4,090 | 16,840 | 10,070 | 8,495 | 19,830 | 6,750 | 13,705 | 15,000 | 3,850 | 3,570 | 1,975 | 11,415 | **184,445** | | |
| Status Indians, 1999 | 2,369 | | 3,442 | 4,992 | 13,858 | 9,385 | 5,058 | 3,121 | 4,638 | 15,756 | 9,446 | 7,831 | 24,372 | 4,700 | 12,036 | 12,336 | 2,946 | 2,922 | 711 | 7,518 | **147,982** | | |
| 6 Educational attainment | | | | | | | | | | | | | | | | | | | | | | | |
| High school graduation | 55% | 58% | 55% | 54% | 54% | 51% | 59% | 62% | 53% | 46% | 46% | 42% | 45% | 39% | 39% | 59% | 61% | 62% | 71% | 58% | **51%** | 71% | 39% |
| 7 Educational attainment | | | | | | | | | | | | | | | | | | | | | | | |
| Post-secondary graduation | 34% | 32% | 29% | 30% | 28% | 26% | 33% | 35% | 34% | 25% | 24% | 22% | 23% | 21% | 18% | 33% | 33% | 31% | 43% | 33% | **27%** | 43% | 18% |
| 8 Employment rate | | | | | | | | | | | | | | | | | | | | | | | |
| Men age 15+ | 76% | 83% | 70% | 72% | 69% | 75% | 84% | 83% | 78% | 74% | 66% | 70% | 62% | 70% | 67% | 68% | 83% | 77% | 96% | 81% | **72%** | 96% | 62% |
| Women age 15+ | 74% | 86% | 79% | 77% | 75% | 74% | 85% | 83% | 78% | 79% | 76% | 81% | 73% | 78% | 74% | 75% | 80% | 88% | 90% | 82% | **78%** | 90% | 73% |
| Total age 15+ | 76% | 84% | 75% | 75% | 72% | 74% | 85% | 83% | 78% | 77% | 70% | 76% | 67% | 74% | 70% | 71% | 82% | 83% | 92% | 81% | **75%** | 92% | 67% |

| Health Indicators Regional Data | East Kootenay | West Kootenay | North Okanagan | Okanagan Similkameen | Thompson | Fraser Valley | South Fraser Valley | Simon Fraser | Coast Garibaldi | Central Vancouver Island | Upper Island/ Central Coast | Cariboo | North West | Peace Liard | Northern Interior | Vancouver | Burnaby | North Shore | Richmond | Capital | British Columbia | Best Rate | Worst Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Men 15-24 | 73% | 80% | 66% | 73% | 57% | 66% | 78% | 87% | 84% | 64% | 56% | 66% | 52% | 68% | 57% | 59% | 90% | 67% | 71% | 77% | **65%** | 90% | 52% |
| Women 15-24 | 67% | 81% | 79% | 76% | 66% | 63% | 86% | 76% | 63% | 69% | 54% | 80% | 65% | 81% | 70% | 67% | 83% | 87% | 75% | 71% | **71%** | 87% | 54% |
| Total age 15-24 | 70% | 81% | 69% | 73% | 60% | 65% | 82% | 81% | 75% | 66% | 56% | 73% | 58% | 75% | 63% | 63% | 87% | 76% | 74% | 73% | **68%** | 87% | 56% |
| 9 Employment to population ratio | | | | | | | | | | | | | | | | | | | | | | | |
| Age 15+ | 53% | 55% | 46% | 47% | 44% | 44% | 58% | 59% | 50% | 42% | 46% | 45% | 43% | 47% | 42% | 40% | 55% | 52% | 63% | 49% | **46%** | 63% | 40% |
| 10 Income <$10,000 | | | | | | | | | | | | | | | | | | | | | | | |
| Men age 15+ | 35% | 27% | 45% | 38% | 47% | 42% | 33% | 30% | 42% | 49% | 41% | 42% | 40% | 37% | 41% | 53% | 33% | 46% | 29% | 42% | **42%** | 27% | 53% |
| Women age 15+ | 45% | 45% | 50% | 39% | 50% | 46% | 37% | 38% | 54% | 52% | 46% | 53% | 46% | 52% | 50% | 45% | 34% | 38% | 31% | 39% | **46%** | 31% | 54% |
| Total age 15+ | 40% | 37% | 48% | 39% | 49% | 44% | 35% | 34% | 48% | 51% | 43% | 48% | 43% | 45% | 46% | 49% | 34% | 42% | 30% | 40% | **44%** | 30% | 51% |
| 11 Average employment income Full-year full-time workers | | | | | | | | | | | | | | | | | | | | | | | |
| Men age 15+ ($) | 42328 | 42090 | 32389 | 28977 | 34089 | 33380 | 39602 | 36101 | 37443 | 31392 | 35871 | 35697 | 37837 | 40917 | 36323 | 31734 | 35390 | 38227 | 39386 | 29566 | **35384** | 42328 | 28977 |
| Women age 15+ ($) | 18935 | 26297 | 25839 | 23841 | 24952 | 26046 | 28593 | 28147 | 19590 | 23407 | 23583 | 22866 | 25975 | 22677 | 26385 | 28068 | 29879 | 27130 | 35897 | 29187 | **28031** | 35897 | 18935 |
| 12 Composition of total income | | | | | | | | | | | | | | | | | | | | | | | |
| Employment | 75.4% | 70.7% | 64.1% | 65.5% | 72.0% | 70.0% | 77.5% | 78.8% | 68.8% | 67.8% | 71.9% | 73.1% | 73.9% | 74.5% | 72.2% | 63.5% | 78.2% | 75.9% | 78.7% | 70.7% | **71.8%** | 78.8% | 63.5% |
| Govt transfer payments | 19.9% | 23.5% | 29.7% | 29.8% | 23.8% | 25.7% | 18.2% | 16.8% | 26.6% | 28.4% | 24.1% | 25.4% | 24.0% | 23.0% | 24.8% | 29.7% | 19.3% | 16.7% | 16.0% | 23.5% | **24.2%** | 16.0% | 29.8% |
| Other | 4.7% | 5.8% | 6.2% | 4.7% | 4.2% | 4.3% | 4.3% | 4.4% | 4.6% | 3.8% | 4.0% | 1.5% | 2.1% | 2.5% | 2.9% | 6.8% | 2.4% | 7.4% | 5.4% | 5.8% | **4.1%** | | |
| 13 Disparity: Aboriginal rates as a % of non-Aboriginal within each region | | | | | | | | | | | | | | | | | | | | | | | |
| Employment | 87.8% | 96.6% | 84.1% | 84.4% | 76.6% | 78.6% | 92.4% | 90.1% | 82.8% | 81.2% | 76.8% | 80.0% | 68.8% | 73.5% | 70.6% | 73.0% | 92.3% | 83.4% | 103.7% | 85.2% | **78.1%** | 104% | 69% |
| Income | 86.5% | 93.5% | 88.6% | 81.5% | 84.0% | 87.6% | 90.2% | 85.9% | 77.8% | 80.5% | 84.3% | 83.4% | 81.1% | 85.6% | 81.5% | 78.5% | 89.6% | 73.9% | 99.1% | 83.0% | **82.8%** | 99% | 74% |
| Education | 90.9% | 87.7% | 89.0% | 85.5% | 86.2% | 82.4% | 90.8% | 88.8% | 82.7% | 69.5% | 69.8% | 71.4% | 68.6% | 63.1% | 58.7% | 80.4% | 86.4% | 69.8% | 104.6% | 78.8% | **73.3%** | 105% | 59% |
| Average for 7 measures | 88.1% | 92.7% | 87.4% | 83.4% | 82.5% | 83.6% | 91.0% | 87.9% | 80.6% | 77.5% | 78.0% | 79.0% | 74.0% | 75.7% | 71.9% | 77.5% | 89.5% | 75.4% | 102.0% | 82.4% | **79.0%** | 102% | 72% |
| Rank (1 = least disparity) | 5 | 2 | 7 | 9 | 10 | 8 | 3 | 6 | 12 | 15 | 14 | 13 | 19 | 17 | 20 | 16 | 4 | 18 | 1 | 11 | | 1 | 20 |
| 14 Children in care: March 2002 | | | | | | | | | | | | | | | | | | | | | | | |
| Aboriginal children | 70 | 29 | 99 | 169 | 286 | 381 | 300 | 147 | 135 | 458 | 147 | 220 | 322 | 163 | 379 | 687 | 47 | 37 | 2 | 229 | **4307** | | |
| Non-Aboriginal children | 145 | 112 | 274 | 430 | 273 | 558 | 872 | 542 | 90 | 438 | 196 | 111 | 69 | 81 | 152 | 567 | 108 | 113 | 20 | 601 | **5776** | | |
| Total children in care | 215 | 141 | 373 | 599 | 559 | 939 | 1172 | 689 | 225 | 896 | 343 | 331 | 391 | 244 | 531 | 1254 | 155 | 150 | 22 | 830 | **10083** | | |
| Aboriginal children as % of children in care | 32.6% | 20.6% | 26.5% | 28.2% | 51.2% | 40.6% | 25.6% | 21.3% | 60.0% | 51.1% | 42.9% | 66.5% | 82.4% | 66.8% | 71.4% | 54.8% | 30.3% | 24.7% | 9.1% | 27.6% | **42.7%** | | |
| Aboriginal children | | | | | | | | | | | | | | | | | | | | | | | |
| Number in care: Mar 2002 | 70 | 29 | 99 | 169 | 286 | 381 | 300 | 147 | 135 | 458 | 147 | 220 | 322 | 163 | 379 | 687 | 47 | 37 | 2 | 229 | **4,307** | | |
| Est'd Aboriginal pop 0-18 | 2355 | 1484 | 2625 | 3669 | 6455 | 6060 | 8019 | 4066 | 1951 | 7879 | 4614 | 3712 | 8115 | 3604 | 6281 | 4178 | 1135 | 1367 | 795 | 5029 | **83395** | | |
| Estimated % in care | 3.0% | 2.0% | 3.8% | 4.6% | 4.4% | 6.3% | 3.7% | 3.6% | 6.9% | 5.8% | 3.2% | 5.9% | 4.0% | 4.5% | 6.0% | 16.4% | 4.1% | 2.7% | 0.3% | 4.6% | **5.2%** | 0.3% | 16.4% |
| Non-Aboriginal children | | | | | | | | | | | | | | | | | | | | | | | |
| Number in care: Mar 2002 | 145 | 112 | 274 | 430 | 273 | 558 | 872 | 542 | 90 | 438 | 196 | 111 | 69 | 81 | 152 | 567 | 108 | 113 | 20 | 601 | **5776** | | |
| Est'd Aboriginal pop 0-18 | 16021 | 17390 | 25776 | 48126 | 27445 | 60661 | 143045 | 75155 | 16461 | 49317 | 26500 | 17415 | 19272 | 17145 | 31424 | 96121 | 37597 | 36295 | 34443 | 61067 | **858683** | | |
| Estimated % in care | 0.8% | 0.6% | 1.1% | 0.9% | 1.0% | 0.9% | 0.6% | 0.7% | 0.5% | 0.9% | 0.7% | 0.6% | 0.4% | 0.5% | 0.5% | 0.6% | 0.3% | 0.3% | 0.1% | 1.0% | **0.7%** | 0.1% | 1.1% |
| **HEALTHY GROWTH AND DEVELOPMENT** | | | | | | | | | | | | | | | | | | | | | | | |
| 15 Teen pregnancy (age 15-19) | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians: 1999 | | | | | | | | | | | | | | | | | | | | | | | |
| Est'd number of pregnancies | [illegible] | | 17 | 30 | 45 | 65 | 28 | 17 | 24 | 107 | 52 | 43 | 103 | 34 | 53 | 50 | 14 | 14 | 2 | 37 | **752** | | |
| Rate per 1,000 women | [illegible] | | 146.6 | 163.0 | 84.7 | 163.3 | 169.7 | 195.4 | 134.1 | 154.0 | 144.4 | 122.9 | 109.2 | 223.7 | 101.0 | 134.0 | 119.7 | 106.5 | 166.7 | 117.5 | **131.2** | 84.7 | 223.7 |
| Other B.C. residents: 1999 | | | | | | | | | | | | | | | | | | | | | | | |
| Est'd number of pregnancies | [illegible] | | 110 | 234 | 131 | [illegible] | 673 | 352 | 83 | 308 | 171 | 110 | 80 | 117 | 166 | 462 | 188 | 104 | 135 | 369 | **4,380** | | |
| Rate per 1,000 women | [illegible] | | 25.9 | 33.4 | 29.6 | 39.7 | 36.1 | 34.8 | 33.3 | 40.3 | 40.9 | 39.5 | 30.2 | 48.8 | 35.0 | 33.4 | 35.0 | 19.5 | 24.0 | 40.2 | **35.1** | 19.5 | 48.8 |
| Ratio: Status Indian/Others | [illegible] | | 5.7 | 4.9 | 2.9 | 4.1 | 4.7 | 5.6 | 4.0 | 3.8 | 3.5 | 3.1 | 3.6 | 4.6 | 2.9 | 4.0 | 3.4 | 5.6 | 6.9 | 2.9 | **3.7** | | |
| [illegible] Pre-term births | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | [illegible] | | [illegible] | 6.4% | 8.8% | 6.1% | 7.1% | 9.0% | 7.9% | 11.1% | 11.2% | 7.4% | 7.8% | 6.6% | 8.5% | 11.9% | 10.1% | 8.7% | 7.7% | 9.9% | **8.9%** | 5.4% | 11.9% |
| Other B.C. residents | [illegible] | | [illegible] | 6.1% | 6.1% | 5.4% | 6.5% | 6.2% | 5.5% | 5.8% | 5.6% | 5.9% | 6.0% | 4.6% | 6.1% | 6.9% | [illegible] | 5.6% | 6.1% | 6.1% | **6.1%** | 4.6% | 6.9% |
| Ratio: Status Indian/Others | | | [illegible] | 1.0 | 1.4 | 1.1 | 1.1 | 1.5 | 1.4 | 1.9 | 2.0 | 1.2 | 1.3 | 1.4 | 1.4 | 1.7 | 1.5 | 1.5 | 1.3 | 1.6 | **1.5** | | |
| [illegible] Low Birth Weight | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | [illegible] | | [illegible] | 4.7% | [illegible] | 6.1% | 4.3% | 6.2% | 4.4% | 5.8% | 6.0% | 5.6% | 4.5% | 5.0% | 5.8% | 7.4% | [illegible] | 5.0% | 4.4% | 6.1% | **5.6%** | 3.5% | 7.4% |
| Other B.C. residents | [illegible] | | [illegible] | [illegible] | [illegible] | 4.6% | 5.4% | 4.9% | 4.7% | 4.5% | 4.8% | 5.3% | 4.8% | 3.8% | 5.1% | 5.6% | 5.4% | 4.2% | 4.6% | 4.8% | **5.0%** | 3.8% | 5.6% |
| Ratio: Status Indian/Others | [illegible] | | [illegible] | [illegible] | [illegible] | 1.3 | 0.8 | 1.3 | 0.9 | 1.3 | 1.3 | 1.1 | 0.9 | 1.3 | 1.1 | 1.3 | 1.4 | 1.2 | 0.9 | 1.3 | **1.1** | | |
| [illegible] | | | | | | | | | | | | | | | | | | | | | | | |
| [illegible] | [illegible] | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 7.3 | 4.0 | 11.6 | 11.5 | 5.4 | 4.7 | 3.8 | 7.5 | 8.9 | [illegible] | 4.4 | 5.5 | 5.1 | **6.9** | 7.9 | 13.5 |
| [illegible] | [illegible] | | [illegible] | [illegible] | [illegible] | [illegible] | 1.8 | [illegible] | [illegible] | 1.9 | 1.5 | 1.9 | [illegible] | 1.4 | [illegible] | 1.3 | [illegible] | [illegible] | [illegible] | [illegible] | **1.5** | [illegible] | 2.3 |
| [illegible] | [illegible] | | [illegible] | [illegible] | [illegible] | 4.0 | 2.7 | [illegible] | 4.0 | 6.1 | 9.0 | 2.8 | 3.9 | 2.7 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | **4.6** | | |
| **PHYSICAL ENVIRONMENT** | | | | | | | | | | | | | | | | | | | | | | | |
| [illegible] | | | | | | | | | | | | | | | | | | | | | | | |
| [illegible] | | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | | [illegible] | **8,955** | | |
| [illegible] | | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | | [illegible] | **16,025** | | |
| [illegible] | | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | | [illegible] | **56%** | [illegible] | [illegible] |

| Health Indicators Regional Data | East Kootenay | West Kootenay | North Okanagan | Okanagan Similkameen | Thompson | Fraser Valley | South Fraser Valley | Simon Fraser | Coast Garibaldi | Central Vancouver Island | Upper Island/ Central Coast | Cariboo | North West | Peace Liard | Northern Interior | Vancouver | Burnaby | North Shore | Richmond | Capital | British Columbia | Best Rate | Worst Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | | | | | | | | | | | | | | | | | | | | | | | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | | [illegible] | 12 939 | | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | | [illegible] | 16 025 | | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | | [illegible] | 81% | | |
| HEALTH SERVICES | | | | | | | | | | | | | | | | | | | | | | | |
| [illegible] | | | | | | | | | | | | | | | | | | | | | | | |
| [illegible] | | | | | | | | | | | | | | | | | | | | | | | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1.5% | | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 2.1% | | |
| [illegible] | | | | | | | | | | | | | | | | | | | | | | | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | [illegible] | 48.5% | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | [illegible] | 15.6% | [illegible] | [illegible] |
| [illegible] | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 839 | | |
| Other B.C. residents | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 872 | | |
| [illegible] | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | | | | | | | | | | | | | | | | | | | | | | | |
| Cases per 1,000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | [illegible] | [illegible] | 274 | | |
| Days per 1,000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | [illegible] | [illegible] | 1025 | | |
| [illegible] per 1,000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | [illegible] | [illegible] | 267 | | |
| Others | | | | | | | | | | | | | | | | | | | | | | | |
| Cases per 1,000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | [illegible] | [illegible] | 172 | | |
| Days per 1,000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | [illegible] | 624 | 590 | | |
| [illegible] per 1,000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | [illegible] | [illegible] | 158 | | |
| 24 Residential care [illegible] | | | | | | | | | | | | | | | | | | | | | | | |
| Days per 1,000 1999/2000 | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | | [illegible] | 1 893 | | |
| Other B.C. residents | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | | [illegible] | 2 273 | | |
| 25 Home support [illegible] | | | | | | | | | | | | | | | | | | | | | | | |
| Hours per 1,000 1999/2000 | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | [illegible] | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 143 | [illegible] | [illegible] | [illegible] | [illegible] | | 282 | | [illegible] | 935 | | |
| Other B.C. residents | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 2 474 | [illegible] | [illegible] | [illegible] | 1 944 | | 1 491 | | 2 419 | 1 829 | | |
| 26 Preventable admissions | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | | | | | | | | | | | | | | | | | | | | | | | |
| Cases 2000/01 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 36 | 84 | 162 | 100 | 226 | 62 | 129 | 76 | 8 | 11 | 2 | 46 | 1 134 | | |
| Rate per 1,000 population | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 17.8 | 11.4 | 6.8 | [illegible] | 1.4 | 9.7 | 12.3 | 1.4 | [illegible] |
| Other B.C. residents | | | | | | | | | | | | | | | | | | | | | | | |
| Cases 2000/01 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 544 | 1 930 | 568 | 178 | 443 | 1 448 | 15 537 | | |
| Rate per 1,000 population | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 4.7 | [illegible] | 3.0 | 2.1 | 2.8 | 4.2 | 4.0 | 2.1 | [illegible] |
| 27 Children's dental procedures | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indian children | | | | | | | | | | | | | | | | | | | | | | | |
| Hospital cases age 0-14 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 124 | 44 | [illegible] | 191 | [illegible] | 64 | 23 | 5 | [illegible] | 3 | [illegible] | 735 | | |
| Rate per 1,000 children | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 39.8 | 15.2 | [illegible] | 26.6 | 14.7 | 10.8 | 17.2 | 4.5 | 26.0 | 24.4 | 4.5 | 39.8 |
| Other children | | | | | | | | | | | | | | | | | | | | | | | |
| Hospital cases age 0-14 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 270 | 112 | 129 | 60 | 209 | [illegible] | 156 | 81 | 131 | 203 | 4 037 | | |
| Rate per 1,000 children | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 9.5 | [illegible] | [illegible] | 7.5 | [illegible] | 7.5 | 5.5 | 5.1 | 2.8 | 4.8 | 4.0 | 5.6 | 2.4 | 9.5 |
| 28 Community follow up | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indian | | | | | | | | | | | | | | | | | | | | | | | |
| Mental health admissions | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 29 | [illegible] | 112 | 88 | 224 | 51 | 122 | 75 | 14 | 13 | 2 | [illegible] | 1,071 | | |
| % seen < 30 days after discharge | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 47% | 53% | 48% | 57% | [illegible] | 70% | 69% | 89% | 69% | 60% | 89% | 47% |
| Other B.C. residents | | | | | | | | | | | | | | | | | | | | | | | |
| Mental health admissions | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1 454 | [illegible] | 1 073 | [illegible] | 414 | 569 | 403 | 832 | 2 778 | 534 | 486 | 615 | 1 866 | 19,712 | | |
| % seen < 30 days after discharge | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 88% | [illegible] | [illegible] | 81% | 78% | 75% | 84% | 77% | 77% | 87% | 84% | 87% | 85% | 92% | 75% |
| **DISEASE AND INJURY PREVENTION** | | | | | | | | | | | | | | | | | | | | | | | |
| 29 Smoking attributable deaths | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | | | | | | | | | | | | | | | | | | | | | | | |
| Deaths 1991-1999 | [illegible] | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 41 | 22 | [illegible] | [illegible] | 33 | 120 | 18 | 54 | 66 | 17 | 19 | 5 | 37 | 776 | | |
| Rate per 10,000 | [illegible] | | 14.4 | [illegible] | [illegible] | 15.8 | [illegible] | 90.2 | 13.9 | [illegible] | [illegible] | 10.5 | 11.9 | 15.5 | 14.2 | 22.7 | 82.5 | 17.8 | 58.3 | 20.3 | 16.1 | 10.5 | 90.2 |
| Others | | | | | | | | | | | | | | | | | | | | | | | |
| Deaths 1991-1999 | [illegible] | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 3264 | [illegible] | 3494 | 1224 | 705 | [illegible] | 506 | 954 | 6914 | 2530 | 2111 | 1359 | 5689 | 47795 | | |
| Rate per 10,000 | [illegible] | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 14.4 | [illegible] | [illegible] | 13.8 | [illegible] | 15.4 | 15.9 | 15.9 | 12.4 | 13.1 | 11.1 | 10.4 | 12.3 | 12.8 | 10.4 | 15.9 |
| 30 Alcohol-related deaths | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | | | | | | | | | | | | | | | | | | | | | | | |
| Number 1991-1999 | [illegible] | | 41 | [illegible] | [illegible] | 57 | 26 | [illegible] | [illegible] | 146 | 116 | 94 | 182 | 34 | 79 | 304 | 13 | 36 | 4 | 50 | 1528 | | |
| Rate per 10,000 population | [illegible] | | [illegible] | [illegible] | [illegible] | 14.2 | [illegible] | [illegible] | [illegible] | 19.7 | 22.9 | 21.9 | 13.7 | 18.4 | 15.5 | 37.9 | 27.5 | 23.1 | 7.4 | 14.8 | 20.7 | 7.4 | 37.9 |

## Health Indicators Regional Data

| | East Kootenay | West Kootenay | North Okanagan | Okanagan Similkameen | Thompson | Fraser Valley | South Fraser Valley | Simon Fraser | Coast Garibaldi | Central Vancouver Island | Upper Island/ Central Coast | Cariboo | North West | Peace Liard | Northern Interior | Vancouver | Burnaby | North Shore | Richmond | Capital | British Columbia | Best Rate | Worst Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Other B.C. residents | | | | | | | | | | | | | | | | | | | | | | | |
| Number, 1991-1999 | | [illegible] | 457 | 674 | 523 | 598 | 1234 | 820 | 311 | 833 | 179 | 216 | 218 | 147 | 314 | 2390 | 572 | 481 | 241 | 1284 | 12511 | | |
| Rate per 10,000 population | | 4.1 | [illegible] | 3.4 | 5.0 | 2.8 | 2.7 | 3.5 | 4.8 | 3.5 | 4.1 | 4.2 | 4.8 | 3.6 | 4.1 | 4.6 | 3.1 | 2.6 | 1.8 | 3.3 | 3.5 | 1.8 | 5.0 |
| 17. HIV/AIDS deaths | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | | | | | | | | | | | | | | | | | | | | | | | |
| Deaths, 1991-1999 | | [illegible] | 2 | [illegible] | [illegible] | 4 | 5 | 0 | 1 | 16 | 6 | 1 | 4 | 0 | 3 | 64 | 1 | 4 | 0 | 7 | 122 | | |
| Rate per 10,000 | | [illegible] | 1.1 | [illegible] | [illegible] | [illegible] | 1.4 | 0.0 | 0.2 | 1.4 | 1.2 | 0.2 | 0.2 | 0.0 | 0.4 | 5.9 | 0.5 | 1.6 | 0.0 | 1.2 | 1.2 | 0.0 | 5.9 |
| Others | | | | | | | | | | | | | | | | | | | | | | | |
| Deaths, 1991-1999 | | [illegible] | [illegible] | 38 | [illegible] | 36 | 111 | [illegible] | 11 | [illegible] | [illegible] | 6 | 1 | 5 | 12 | 1087 | 21 | 76 | 39 | 148 | 1804 | | |
| Rate per 10,000 | | [illegible] | [illegible] | 0.2 | [illegible] | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 2.1 | 0.4 | 0.4 | 0.3 | 0.5 | 0.5 | 0.0 | 2.1 |
| [illegible] Injury deaths, 1991-1999 | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | | | | | | | | | | | | | | | | | | | | | | | |
| Number of deaths 91-99 | | | | | | | | | | | | | | | | | | | | | | | |
| [illegible] | | 3 | [illegible] | [illegible] | 31 | 26 | [illegible] | [illegible] | [illegible] | [illegible] | 23 | 27 | 51 | 7 | 52 | 59 | 7 | 7 | 2 | 29 | 466 | | |
| [illegible] | | [illegible] | 36 | 34 | [illegible] | 81 | 41 | 28 | 34 | [illegible] | 75 | 92 | 144 | 36 | 104 | 246 | 12 | 20 | 6 | 64 | 1286 | | |
| Total injury deaths | | [illegible] | 46 | 43 | 164 | 107 | 56 | 34 | 47 | 170 | 98 | 119 | 195 | 43 | 156 | 305 | 19 | 27 | 8 | 93 | 1752 | | |
| Rate per 10,000 | | | | | | | | | | | | | | | | | | | | | | | |
| [illegible] | | [illegible] | 3.2 | [illegible] | [illegible] | 3.9 | 3.8 | 4.1 | [illegible] | 6.2 | 2.9 | 4.7 | 2.7 | 2.9 | 5.4 | 5.3 | 2.4 | 2.7 | 4.9 | 4.3 | 4.1 | 2.2 | 6.2 |
| [illegible] | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 15.2 | 24.6 | 12 | 9.1 | 10.8 | 18.8 | 8.5 | 14.7 | 13.6 | 25.1 | 13 | 9 | 21.4 | 15 | 13.4 | 8.5 | 25.1 |
| [illegible] | | [illegible] | [illegible] | [illegible] | 16.0 | 17.4 | 19.0 | 28.7 | 15.6 | 15.3 | [illegible] | [illegible] | 11.2 | 17.6 | 19.0 | 30.4 | 15.4 | 11.7 | 26.3 | 19.3 | 17.5 | 11.2 | 30.4 |
| Others | | | | | | | | | | | | | | | | | | | | | | | |
| [illegible] | | | | | | | | | | | | | | | | | | | | | | | |
| [illegible] | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 344 | [illegible] | [illegible] | 162 | 102 | 88 | 74 | 140 | [illegible] | 202 | 162 | [illegible] | 419 | 4784 | | |
| [illegible] | | [illegible] | 437 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 394 | 298 | 272 | 218 | 479 | [illegible] | 482 | 402 | 280 | 1130 | 12395 | | |
| [illegible] | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1061 | 556 | [illegible] | 360 | 292 | 619 | [illegible] | 684 | 564 | [illegible] | 1549 | 17179 | | |
| [illegible] | | | | | | | | | | | | | | | | | | | | | | | |
| [illegible] | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1.7 | [illegible] | [illegible] | 1.8 | 1.6 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 0.8 | 1.4 | 1.4 | 0.8 | 1.9 |
| [illegible] | | [illegible] | 4.4 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 4 | [illegible] | [illegible] | 5.6 | 5.2 | 4.8 | 5.4 | [illegible] | [illegible] | 2.4 | 2.1 | [illegible] | 3.7 | 2.1 | 5.6 |
| [illegible] | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 4.4 | [illegible] | 5.4 | [illegible] | 7.4 | 6.8 | [illegible] | [illegible] | [illegible] | [illegible] | 3.4 | 2.9 | 4.4 | 5.1 | 2.9 | 7.4 |
| [illegible] | | | | | | | | | | | | | | | | | | | | | | | |
| [illegible] | | | | | | | | | | | | | | | | | | | | | | | |
| [illegible] | | [illegible] | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 29 | 20 | 6 | 28 | 6 | [illegible] | [illegible] | 4 | [illegible] | [illegible] | [illegible] | 391 | | |
| [illegible] | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 2.7 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 3.7 | 0.4 | 15.1 |
| [illegible] | | | | | | | | | | | | | | | | | | | | | | | |
| [illegible] | | [illegible] | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 170 | [illegible] | [illegible] | 39 | 21 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 3623 | | |
| [illegible] | | [illegible] | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 0.7 | 0.4 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1.1 | 0.4 | 2.2 |

| Health Indicators Regional Data | East Kootenay | West Kootenay | North Okanagan | Okanagan Similkameen | Thompson | Fraser Valley | South Fraser Valley | Simon Fraser | Coast Garibaldi | Central Vancouver Island | Upper Island/ Central Coast | Cariboo | North West | Peace Liard | Northern Interior | Vancouver | Burnaby | North Shore | Richmond | Capital | British Columbia | Best Rate | Worst Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 Drinking water supplies | | | | | | | | | | | | | | | | | | | | | | | |
| Meets health requirements | 253 | | 388 | 442 | 1 626 | 1 130 | 26 | 14 | 421 | 1 472 | 1 399 | 1 070 | 2 679 | 351 | 1 037 | 2 | - | 89 | | 540 | **12,939** | | |
| Total housing units | 263 | | 388 | 518 | 2 039 | 1 170 | 91 | 94 | 589 | 1 530 | 1 596 | 1 345 | 3 516 | 363 | 1 336 | 156 | | 491 | | 540 | **16,025** | | |
| % meeting DWQ guidelines | 96% | | 100% | 85% | 80% | 97% | 29% | 15% | 71% | 96% | 88% | 80% | 76% | 97% | 78% | 1% | - | 18% | | 100% | **81%** | 100% | 1% |
| **HEALTH SERVICES** | | | | | | | | | | | | | | | | | | | | | | | |
| 21 Screening mammography | | | | | | | | | | | | | | | | | | | | | | | |
| First Nations women | | | | | | | | | | | | | | | | | | | | | | | |
| as a % of SMP participants | 2.1% | 0.7% | 0.7% | 1.1% | 5.5% | 1.3% | 0.6% | 0.4% | 2.2% | 1.2% | 2.0% | 7.7% | 22.1% | 3.9% | 8.7% | 0.9% | 0.5% | 0.6% | 0.2% | 0.8% | **1.5%** | | |
| as a % of regional population | 2.9% | 1.3% | 2.6% | 1.4% | 5.4% | 2.3% | 1.3% | 1.1% | 2.5% | 3.0% | 5.1% | 7.8% | 18.5% | 7.5% | 5.7% | 1.6% | 1.3% | 0.8% | 0.5% | 1.5% | **2.1%** | | |
| Participation rate | | | | | | | | | | | | | | | | | | | | | | | |
| Overall regional rate | 22.2% | 30.8% | 52.2% | 54.3% | 54.3% | 48.8% | 46.9% | 49.0% | 31.7% | 51.4% | 44.7% | 40.5% | 35.8% | 38.1% | 48.1% | 47.8% | 49.8% | 51.5% | 54.5% | 54.3% | **48.5%** | 55% | 22% |
| First Nations women (est.) | 15.8% | 16.5% | 14.6% | 41.0% | 55.2% | 28.3% | 21.0% | 18.5% | 28.2% | 20.8% | 17.7% | 40.0% | 42.8% | 19.9% | 73.3% | 25.9% | 20.7% | 37.1% | 21.2% | 31.2% | **35.6%** | 73% | 15% |
| 22 MSP utilization rates 2000/01 | | | | | | | | | | | | | | | | | | | | | | | |
| Patients per 1 000 | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | 803 | 794 | 849 | 794 | 867 | 848 | 834 | 816 | 894 | 883 | 856 | 809 | 825 | 813 | 861 | 729 | 781 | 876 | 839 | 854 | **839** | | |
| Other B.C. residents | 813 | 832 | 858 | 870 | 837 | 868 | 902 | 875 | 827 | 847 | 821 | 798 | 776 | 807 | 806 | 868 | 886 | 886 | 882 | 879 | **872** | | |
| 23 Hospitalization rates 2000/01 | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | | | | | | | | | | | | | | | | | | | | | | | |
| Cases per 1 000 | 235 | 317 | 199 | 203 | 262 | 226 | 195 | 196 | 270 | 275 | 393 | 289 | 319 | 297 | 344 | 193 | | 213 | 192 | 233 | **274** | | |
| Days per 1 000 | 739 | 1912 | 707 | 774 | 976 | 776 | 680 | 827 | 1059 | 1036 | 1587 | 1069 | 991 | 1682 | 1361 | 741 | - | 756 | 610 | 1027 | **1025** | | |
| RIWs per 1 000 | 154 | 337 | 181 | 206 | 243 | 199 | 180 | 213 | 265 | 249 | 381 | 270 | 327 | 371 | 316 | 204 | - | 180 | 152 | 258 | **267** | | |
| Others | | | | | | | | | | | | | | | | | | | | | | | |
| Cases per 1 000 | 198 | 219 | 184 | 177 | 201 | 197 | 174 | 162 | 185 | 180 | 193 | 217 | 203 | 189 | 186 | 139 | - | 145 | 138 | 169 | **172** | | |
| Days per 1 000 | 654 | 699 | 618 | 561 | 662 | 565 | 558 | 551 | 594 | 623 | 619 | 669 | 647 | 802 | 703 | 574 | - | 503 | 501 | 624 | **590** | | |
| RIWs per 1 000 | 168 | 181 | 162 | 146 | 183 | 161 | 164 | 155 | 158 | 160 | 175 | 181 | 194 | 193 | 182 | 144 | | 132 | 140 | 152 | **158** | | |
| 24 Residential care utilization | | | | | | | | | | | | | | | | | | | | | | | |
| Days per 1 000 1999/2000 | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | 972 | 20 764 | 1 126 | 1 128 | 2 529 | 988 | 1 698 | 60 | 2 247 | 1 870 | 1.686 | 1.940 | 1 472 | 2.475 | 1.623 | 5 354 | - | 850 | - | 1.825 | **1,803** | | |
| Other B.C. residents | 2 901 | 2 871 | 2 096 | 1 990 | 2 095 | 2 163 | 1 895 | 2 783 | 1 936 | 1 908 | 1.949 | 2 414 | 2.465 | 3 287 | 2.599 | 2.510 | - | 2.387 | - | 2 105 | **2,273** | | |
| 25 Home support utilization | | | | | | | | | | | | | | | | | | | | | | | |
| Hours per 1 000 1999/2000 | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | 78 | 0 | 3 703 | 706 | 160 | 940 | 1 861 | 630 | 57 | 527 | 1 632 | 143 | 601 | 397 | 1 145 | 3 611 | - | 282 | - | 930 | **935** | | |
| Other B.C. residents | 2 353 | 2 645 | 2 125 | 1 206 | 1 309 | 1 670 | 1 407 | 1 683 | 1 450 | 1 821 | 2.591 | 2.674 | 2.222 | 1.828 | 1.926 | 1.944 | - | 1 493 | - | 2.439 | **1,829** | | |
| 26 Preventable admissions | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | | | | | | | | | | | | | | | | | | | | | | | |
| Cases 2000/01 | 7 | 4 | 15 | 25 | 83 | 38 | 17 | 9 | 36 | 84 | 162 | 93 | 226 | 62 | 129 | 76 | 8 | 11 | 2 | 46 | **1,134** | | |
| Rate per 1 000 population | 6.5 | 13.1 | 6.6 | 7.6 | 9.7 | 6.4 | 5.8 | 5.1 | 11.2 | 8.6 | 26.0 | 16.2 | 14.0 | 21.5 | 17.8 | 11.4 | 6.8 | 5.4 | 3.4 | 9.7 | **12.3** | 3.4 | 26.0 |
| Other B.C. residents | | | | | | | | | | | | | | | | | | | | | | | |
| Cases 2000/01 | 444 | 487 | 488 | 1 097 | 541 | 1 058 | 1 630 | 1 045 | 445 | 962 | 631 | 385 | 488 | 396 | 544 | 1 930 | 568 | 378 | 443 | 1.448 | **15,537** | | |
| Rate per 1 000 population | 5.6 | 5.8 | 4.1 | 4.5 | 4.3 | 4.5 | 2.9 | 3.4 | 6.0 | 4.0 | 5.6 | 5.7 | 7.1 | 6.8 | 4.7 | 3.4 | 3.0 | 2.1 | 2.8 | 4.2 | **4.0** | 2.1 | 7.1 |
| 27 Children's dental procedures | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indian children | | | | | | | | | | | | | | | | | | | | | | | |
| Hospital cases age 0-14 | 2 | 1 | 8 | 10 | 48 | 29 | 10 | 7 | 31 | 124 | 44 | 77 | 191 | 9 | 64 | 23 | 3 | 10 | 1 | 41 | **736** | | |
| Rate per 1 000 children | 5.1 | 7.8 | 12.7 | 9.9 | 18.2 | 14.3 | 10.0 | 11.3 | 28.1 | 33.7 | 21.3 | 39.8 | 35.2 | 8.2 | 26.6 | 14.7 | 10.8 | 17.2 | 4.5 | 26.0 | **24.4** | 4.5 | 39.8 |
| Other children | | | | | | | | | | | | | | | | | | | | | | | |
| Hospital cases age 0-14 | 36 | 81 | 101 | 94 | 166 | 344 | 643 | 393 | 71 | 382 | 210 | 112 | 129 | 60 | 209 | 430 | 156 | 81 | 131 | 203 | **4,037** | | |
| Rate per 1 000 children | 2.4 | 5.8 | 4.9 | 2.5 | 7.0 | 6.7 | 5.3 | 6.2 | 5.3 | 9.5 | 9.3 | 7.7 | 7.5 | 3.8 | 7.5 | 5.5 | 5.1 | 2.8 | 4.8 | 1.0 | **5.6** | 2.4 | 9.5 |
| 28 Community follow-up | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indian | | | | | | | | | | | | | | | | | | | | | | | |
| Mental health admissions | 10 | 6 | 14 | 22 | 82 | 38 | 21 | 17 | 29 | 70 | 132 | 88 | 224 | 53 | 122 | 75 | 14 | 13 | 2 | 40 | **1,071** | | |
| % seen <30 days after discharge | 58% | 71% | 79% | 41% | 68% | 88% | 77% | 76% | 66% | 77% | 52% | 47% | 53% | 48% | 57% | 50% | 70% | 69% | 89% | 69% | **60%** | 89% | 47% |
| Other B.C. residents | | | | | | | | | | | | | | | | | | | | | | | |
| Mental health admissions | 518 | 617 | 601 | 1 381 | 766 | 1 405 | 2 128 | 1 454 | 463 | 1 073 | 625 | 414 | 569 | 403 | 832 | 2.778 | 534 | 486 | 615 | 1.866 | **19,712** | | |
| % seen <30 days after discharge | 75% | 88% | 92% | 90% | 89% | 91% | 91% | 83% | 88% | 89% | 86% | 81% | 78% | 75% | 84% | 77% | 77% | 87% | 84% | 87% | **86%** | 92% | 75% |
| **DISEASE AND INJURY PREVENTION** | | | | | | | | | | | | | | | | | | | | | | | |
| 29 Smoking-attributable deaths | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | | | | | | | | | | | | | | | | | | | | | | | |
| Deaths 1991-1999 | 23 | | 22 | 36 | 65 | 48 | 31 | 41 | 22 | 63 | 56 | 33 | 120 | 18 | 54 | 66 | 17 | 19 | 5 | 37 | **776** | | |
| Rate per 10 000 | 36.8 | | 14.4 | 22.7 | 12.2 | 15.8 | 43.6 | 90.2 | 13.9 | 13.1 | 16.7 | 10.5 | 11.9 | 15.5 | 14.2 | 22.7 | 82.5 | 17.8 | 58.3 | 20.3 | **18.1** | 10.5 | 90.2 |
| Others | | | | | | | | | | | | | | | | | | | | | | | |
| Deaths 1991-1999 | 2171 | | 1727 | 3532 | 1538 | 2905 | 5662 | 3264 | 872 | 3494 | 1224 | 705 | 532 | 506 | 954 | 6914 | 2530 | 2111 | 1359 | 5689 | **47795** | | |
| Rate per 10 000 | 14.5 | | 13.1 | 11.5 | 15.1 | 13.1 | 12.3 | 14.4 | 13.5 | 13.5 | 13.8 | 15.7 | 15.4 | 15.9 | 15.9 | 12.4 | 13.1 | 11.1 | 10.4 | 12.3 | **12.8** | 10.4 | 15.9 |
| 30 Alcohol-related deaths | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | | | | | | | | | | | | | | | | | | | | | | | |
| Number 1991-1999 | 30 | | 41 | 60 | 161 | 57 | 26 | 27 | 65 | 146 | 116 | 94 | 182 | 34 | 79 | 304 | 13 | 36 | 4 | 50 | **1828** | | |
| Rate per 10 000 population | 33.2 | | 21.1 | 25.2 | 22.3 | 14.2 | 13.8 | 33.3 | 30.6 | 19.7 | 22.9 | 21.9 | 13.7 | 18.4 | 15.5 | 37.9 | 27.5 | 23.1 | 7.4 | 14.8 | **20.7** | 7.4 | 37.9 |

| Health Indicators Regional Data | East Kootenay | West Kootenay | North Okanagan | Okanagan Similkameen | Thompson | Fraser Valley | South Fraser Valley | Simon Fraser | Coast Garibaldi | Central Vancouver Island | Upper Island/ Central Coast | Cariboo | North West | Peace Liard | Northern Interior | Vancouver | Burnaby | North Shore | Richmond | Capital | British Columbia | Best Rate | Worst Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Other B.C. residents | | | | | | | | | | | | | | | | | | | | | | | |
| Number 1991-1999 | 607 | | 457 | 874 | 523 | 596 | 1234 | 820 | 311 | 833 | 379 | 216 | 218 | 147 | 314 | 2390 | 572 | 481 | 241 | 1284 | **12511** | | |
| Rate per 10,000 population | 4.1 | | 3.9 | 3.4 | 5.0 | 2.8 | 2.7 | 3.5 | 4.8 | 3.5 | 4.1 | 4.2 | 4.8 | 3.6 | 4.1 | 4.6 | 3.1 | 2.6 | 1.8 | 3.3 | **3.5** | 1.8 | 5.0 |
| 31 HIV/AIDS deaths | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | | | | | | | | | | | | | | | | | | | | | | | |
| Deaths 1991-1999 | 1 | | 2 | 1 | 2 | 4 | 5 | 0 | 1 | 15 | 6 | 1 | 4 | 0 | 3 | 64 | 1 | 4 | 0 | 7 | **122** | | |
| Rate per 10,000 | 0.7 | | 1.1 | 0.3 | 0.2 | 0.6 | 1.4 | 0.0 | 0.2 | 1.4 | 1.2 | 0.2 | 0.2 | 0.0 | 0.4 | 5.9 | 0.5 | 1.6 | 0.0 | 1.2 | **1.2** | 0.0 | 5.9 |
| Others | | | | | | | | | | | | | | | | | | | | | | | |
| Deaths 1991-1999 | 11 | | 11 | 38 | 13 | 36 | 111 | 63 | 11 | 53 | 9 | 6 | 1 | 5 | 12 | 1087 | 71 | 76 | 39 | 148 | **1804** | | |
| Rate per 10,000 | 0.7 | | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 2.1 | 0.4 | 0.4 | 0.3 | 0.5 | **0.5** | 0.0 | 2.1 |
| 32 Injury deaths 1991-1999 | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | | | | | | | | | | | | | | | | | | | | | | | |
| Number of deaths 91-99 | | | | | | | | | | | | | | | | | | | | | | | |
| Suicide/homicide | 4 | | 10 | 9 | 41 | 26 | 13 | 8 | 13 | 78 | 23 | 27 | 51 | 7 | 52 | 59 | 7 | 7 | 2 | 29 | **466** | | |
| Unintentional injuries | 21 | | 35 | 34 | 123 | 81 | 41 | 26 | 34 | 92 | 75 | 92 | 144 | 36 | 104 | 246 | 12 | 20 | 6 | 64 | **1286** | | |
| Total injury deaths | 25 | | 45 | 43 | 164 | 107 | 54 | 34 | 47 | 170 | 98 | 119 | 195 | 43 | 156 | 305 | 19 | 27 | 8 | 93 | **1752** | | |
| Rate per 10,000 | | | | | | | | | | | | | | | | | | | | | | | |
| Suicide/homicide | 2.2 | | 4.2 | 3.3 | 3.9 | 3.9 | 3.8 | 4.1 | 3.6 | 6.2 | 2.9 | 4.7 | 2.7 | 2.9 | 5.4 | 5.3 | 2.4 | 2.7 | 4.9 | 4.3 | **4.1** | 2.2 | 6.2 |
| Unintentional injuries | 20.6 | | 15.8 | 10.8 | 13 | 13.5 | 15.2 | 24.6 | 12 | 9.1 | 10.8 | 18.8 | 8.5 | 14.7 | 13.6 | 25.1 | 13 | 9 | 21.4 | 15 | **13.4** | 8.5 | 25.1 |
| Total injuries | 22.8 | | 20.0 | 14.1 | 16.9 | 17.4 | 19.0 | 28.7 | 15.6 | 15.3 | 13.7 | 23.5 | 11.2 | 17.6 | 19.0 | 30.4 | 15.4 | 11.7 | 26.3 | 19.3 | **17.5** | 11.2 | 30.4 |
| Others | | | | | | | | | | | | | | | | | | | | | | | |
| Number of deaths 91-99 | | | | | | | | | | | | | | | | | | | | | | | |
| Suicide/homicide | 243 | | 147 | 300 | 199 | 288 | 522 | 344 | 100 | 278 | 162 | 102 | 88 | 74 | 140 | 893 | 202 | 162 | 109 | 419 | **4784** | | |
| Unintentional injuries | 617 | | 441 | 750 | 516 | 706 | 1350 | 751 | 262 | 785 | 394 | 299 | 272 | 218 | 479 | 2233 | 482 | 402 | 280 | 1130 | **12395** | | |
| Total injury deaths | 860 | | 588 | 1050 | 715 | 994 | 1872 | 1095 | 362 | 1063 | 556 | 401 | 360 | 292 | 619 | 3126 | 684 | 564 | 389 | 1549 | **17179** | | |
| Rate per 10,000 | | | | | | | | | | | | | | | | | | | | | | | |
| Suicide/homicide | 1.8 | | 1.6 | 1.5 | 1.9 | 1.5 | 1.1 | 1.3 | 1.7 | 1.5 | 1.8 | 1.8 | 1.6 | 1.5 | 1.3 | 1.8 | 1.2 | 1.0 | 0.8 | 1.4 | **1.4** | 0.8 | 1.9 |
| Unintentional injuries | 4.5 | | 4.4 | 3.5 | 5.4 | 3.7 | 3 | 3.1 | 4.3 | 3.9 | 4.3 | 5.6 | 5.2 | 4.8 | 5.4 | 4.1 | 2.7 | 2.4 | 2.1 | 3 | **3.7** | 2.1 | 5.6 |
| Total injuries | 6.3 | | 6.0 | 5.0 | 7.3 | 5.2 | 4.1 | 4.4 | 6.0 | 5.4 | 6.1 | 7.4 | 6.8 | 6.3 | 6.7 | 5.9 | 3.9 | 3.4 | 2.9 | 4.4 | **5.1** | 2.9 | 7.4 |
| 33 Drug-induced deaths | | | | | | | | | | | | | | | | | | | | | | | |
| Status Indians | | | | | | | | | | | | | | | | | | | | | | | |
| Deaths 1991-1999 | 4 | | 1 | 2 | 10 | 23 | 21 | 14 | 8 | 29 | 20 | 6 | 28 | 6 | 22 | 163 | 4 | 6 | 2 | 22 | **391** | | |
| Rate per 10,000 | 2.6 | | 0.4 | 0.7 | 1.2 | 3.7 | 6.8 | 11.1 | 2.8 | 2.7 | 2.7 | 1.2 | 1.7 | 1.9 | 2.7 | 15.1 | 1.7 | 2.5 | 3.0 | 3.6 | **3.7** | 0.4 | 15.1 |
| Others | | | | | | | | | | | | | | | | | | | | | | | |
| Deaths 1991-1999 | 80 | | 70 | 114 | 127 | 177 | 395 | 259 | 56 | 170 | 108 | 39 | 39 | 21 | 70 | 1166 | 171 | 124 | 83 | 343 | **3623** | | |
| Rate per 10,000 | 1.6 | | 0.8 | 0.6 | 1.3 | 1.0 | 0.9 | 1.0 | 0.9 | 0.9 | 1.1 | 0.7 | 0.7 | 0.4 | 0.7 | 2.2 | 1.0 | 0.8 | 0.6 | 1.1 | **1.1** | 0.4 | 2.2 |

## Notes and Sources

### Health Status

1 Life expectancy at birth (years), 1995-1999, for Status Indians and other residents of the region.

2 Infant mortality rate (infant deaths per 1,000 live births), annual rate for period 1991-1999. North Shore rate is not shown due to the small number of infant deaths (2 deaths over the 9-year period).

3 Age standardized mortality rate (ASMR), Status Indian population, 1991-1999. Rates are per 10,000 standard population (Canada Census 1991 as standard population).

4 Potential Years of Life Lost (age under 75 years) rate per 1,000 standard population (Canada 1991 Census). Source: B.C. Vital Statistics Agency, July 2001. Regional analysis of health statistics for Status Indians in British Columbia 1991-1999. Birth-related and mortality summaries for British Columbia and 20 health regions.

### Community Environments

5 Aboriginal identify and total population: Statistics Canada. 1996 Census. Semi-Custom Area Profile. Obtained from the Health Data Warehouse, B.C. Ministry of Health Services, June 2002. Aboriginal ethnic origin from 1996 Census custom tabulation, prepared for the Minsitry of Children and Family Development. Estimated Status Indian population in 1999: B.C. Vital Statistics Agency, July 2001. Regional Analysis of Health Statistics for Status Indians in British Columbia 1991-1999.

6 Proportion of the population age 15 and over who have a high school graduation certificate or higher, based on Census questions about educational attainment.

7 Proportion of the population age 15 and over who have a post-secondary certificate, diploma, or degree of some type, based on Census questions about educational attainment.

8 Proportion of the labour force who were employed in the week prior to Census Day.

9 Proportion of the population age 15 and over who were employed in the week prior to Census Day.

10 Proportion of the population age 15 and over who had incomes less than $10,000, of those who had income in 1995.

11 Average employment income among those who were full-year full-time workers.

12 Composition of total income refers to the relative share of each income source, expressed as a percentage of the aggregate total income of the area. Government transfer income includes old age security pension, CPP, unemployment insurance benefits, Federal Child Tax benefits, and other income from government sources. Other income includes retirement pensions, superannuation and annuities, investment income, and other money income.

5-12 The Aboriginal population includes those who reported identifying with at least one Aboriginal group (North American Indian, Metis, Inuit) and/or those who reported being a Treaty Indian or a Registered Indian as defined by the Indian Act of Canada and/or who were members of an Indian Band or First Nation. Figures include total Aboriginal population living in the health area (off-reserve plus on-reserve portions of the health area). Source: Statistics Canada. 1996 Census Semi-Custom Area Profile. Data obtained from the Health Data Warehouse, B.C. Ministry of Health Services.

13 Rates for the Aboriginal population within a region as a per cent of the non-Aboriginal rates within that region, based on the following measures: Employment: Employment rate age 15 and over and employment to population ratio age 15 and over.
Income: Average employment income for male and female full-year full-time workers and income self-sufficiency (proportion of aggregate total income that comes from sources other than government transfer payments).
Education: High school graduation rate and post-secondary graduation rate, population age 15 and over.
Average: Average disparity based on the above 7 socioeconomic measures. Sources and notes: See indicators 6, 8, 9, 11, and 12 above.

14 Number and proportion of each region's children in care who were Aboriginal, March 31 2002. B.C. total includes 24 non-Aboriginal children of unknown health region. Figures include children in care delegated to Aboriginal agencies. Estimated proportion of each region's Aboriginal and non-Aboriginal children who were in the care of child welfare authorities as of March 31, 2002. Population estimates are based on the 1996 Census population for Aboriginal (ethnic orgin) children age 0-18 and annual growth rates in the Status Indian population age 0-19 since 1996. This method of estimation is based on that used in The Health and Well-being of Aboriginal Children and Youth in British Columbia. B.C. Ministry of Children and Family Development, June 2002.
Sources: Number of children in care from Data Services Branch, B.C. Ministry of Children and Family Development. Unpublished tables, June 25, 2002. 1996 Census population from Statistics Canada custom tabulation, prepared for the Ministry of Children and Family Development. Status Indian population 1991-1999 from B.C. Vital Statistics Agency, July 2001. Regional analysis of health statistics for Status Indians in British Columbia 1991-1999. Birth-related and mortality summaries for British Columbia and 20 health regions.

## Healthy Growth and Development

15 Estimated teen pregnancy rate, based on the number of pregnancies resulting in a live birth, stillbirth, induced abortion, or hospitalization due to miscarriage in 1999. B.C. total includes 5 pregnancies of unknown health region. Source: Status Indian Pregnancy Counts and Rates by Age Groups by Health Region, British Columbia 1991 to 1999. B.C. Vital Statistics Agency, July 2001.

16 Proportion of live births that were premature (gestational age of less than 37 weeks), 1991-1999. B.C. Vital Statistics Agency, July 2001. Regional analysis of health statistics for Status Indians in British Columbia 1991-1999.

17 Proportion of live births with a birthweight less than 2,500g, 1991-1999. B.C. Vital Statistics Agency, July 2001. Regional analysis of health statistics for Status Indians in British Columbia 1991-1999.

18 Number of deaths between 28 and 364 days after birth, as a rate per 1,000 live births, 1991-1999. B.C. Vital Statistics Agency, July 2001. Regional analysis of health statistics for Status Indians in British Columbia 1991-1999.

### Physical Environment

19 "Adequate" housing: number and per cent of housing units on reserve that do not require any minor or major renovations or replacement, 1998-99. Source: Housing and Infrastructure Assets Summary Report 1998-1999. Indian and Northern Affairs Canada. http://www.ainc.inac.gc.ca/pr/sts/logem99_e.html

20 Number and per cent of households on reserve with water supplies that satisfy the health-related requirements of the Guidelines for Canadian Drinking Water Quality, 5th edition (1993). Source: Housing and Infrastructure Assets Summary Report 1998-1999. Indian and Northern Affairs Canada.http://www.ainc.inac.gc.ca/pr/sts/logem99_e.html

### Health Services

21 Regional representation of First Nations women (age 50-74) in the population and among Screening Mammography Program of B.C. (SMPBC) participants, screening participation rate for all women, and estimated participation rate for First Nations women. Estimates are based on women who attended the SMPBC at least once in the 1999-2000 period and who responded to the ethnicity question on a self-administered questionnaire. Source: B.C. Cancer Agency. Unpublished tables, June 17, 2002. Original data source for population data: 1996 Census, Statistics Canada. Note: First Nations figures are estimates only. More precise figures are expected to be available in the future. In addition, some regions have small First Nations populations, so that rates will fluctuate from year to year. Health authorities may wish to examine data based on multi-year periods.

22 Number of patients who saw at least one physician (including medical health professionals such as chiropractors and physiotherapists) in 2000-01, as a rate per 1000 population (age standardized). Rates are based on practitioner billings to the provincial Medical Services Plan. Source: Medical Services Plan. Prepared by Information Support, B.C. Ministry of Health Services, Project 2001-288.

23 Age standardized hospitalization rates: cases, hospital-days, and resource intensity weightings (RIWs), acute/rehab and day surgery levels of care, fiscal year 2000-01. Simon Fraser includes Burnaby. Source: Morbidity Database. Prepared by Information Support, B.C. Ministry of Health Services, Project 2001-288.

24 Number of days spend in residential care facilities as a rate per 1,000 population (age standardized), 1999-2000. Continuing Care Data Warehouse, November 2001 refresh. Prepared by Information Support, B.C. Ministry of Health Services, Project 2001-288.

25 Number of hours of home support services received, as a rate per 1,000 population (age standardized), 1999-2000. Continuing Care Data Warehouse, November 2001 refresh. Prepared by Information Support, B.C. Ministry of Health Services, Project 2001-288.

26 Hospitalizations (cases) for conditions where admissions are usually preventable, if patients have timely access to high quality care in the community. Included here are those with a primary diagnosis of diabetes, alcohol and drug-related conditions, neurosis, depression, hypertension, or asthma. Annual average for 4-year period 1997-98 – 2000-01. Information Support, B.C. Ministry of Health Services, 2001-288.

27 Age standardized rates for tooth extraction, surgical removal of teeth, and other operations on teeth (Surgical Short List Codes 041-043), inpatient and day surgery, children age 0-14. Annual average for 4-year period 1997-98 – 2000-01. Source: Morbidity Database. Information Support, B.C. Ministry of Health Services, 2001-288.

28 Number of cases (age 15-64) admitted to acute care hospitals with a mental health diagnosis (primary diagnosis of ICD-9 290-314, V61 or V62) and proportion who received at least one community contact with a community mental health centre or a fee-for-service general practitioner or psychiatrist within 30 days of discharge from hospital. Annual average for the 4-year period 1997-98 – 2000-01. Source: Mental Health Data Warehouse, Morbidity Database, and MSP Claims. Information Support, B.C. Ministry of Health Services. Unpublished tables, January 2002. Note: B.C. total includes 12 cases of unspecified health region.

### Disease and Injury Prevention

29 Estimated number of deaths attributable to smoking and rate per 10,000 population (age standardized), annual average for period 1991-1999. Source: B.C. Vital Statistics Agency, July 2001. Regional analysis of health statistics for Status Indians in British Columbia 1991-1999. See Glossary of the Vital Statistics report for methodology and list of disease categories.

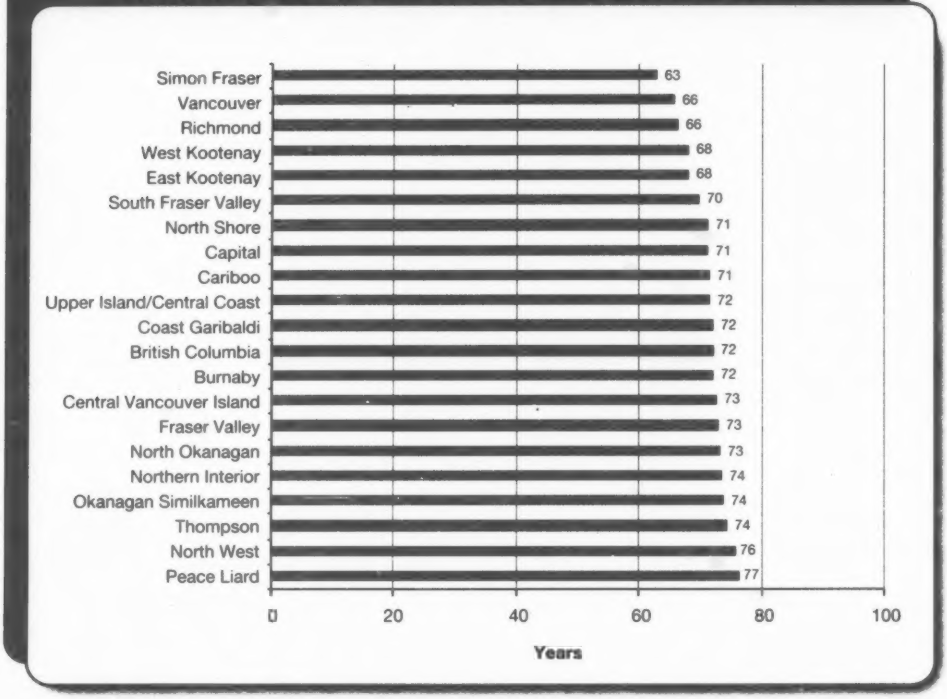
30 Deaths in which alcohol was the underlying or contributing cause of death, as noted on the Medical Certification of Death, 1991-1999. Source: Regional Analysis of Health Statistics for Status Indians in British Columbia 1991-1999. B.C. Vital Statistics Agency, July 2001.

31 Number of deaths due to HIV/AIDS (ICD9 042-044) and rate per 10,000 population (age standardized), annual average for period 1991-1999.
Source: B.C. Vital Statistics Agency, July 2001. Regional analysis of health statistics for Status Indians in British Columbia 1991-1999.

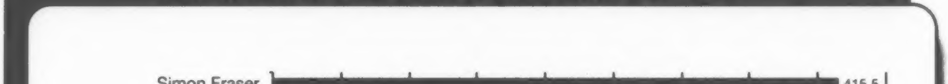
32 Total number of deaths due to suicide/homicide, unintentional injuries, and all external causes (ICD9 E800-E999) and average annual rate per 10,000 population (age standardized), 1991-1999. Source: B.C. Vital Statistics Agency, July 2001. Regional analysis of health statistics for Status Indians in British Columbia 1991-1999.

33 Number of deaths where drugs were the underlying cause of death and rate per 10,000 population (age standardized), annual average for period 1991-1999. Includes causes such as drug dependence, accidental poisonings, and suicides involving drugs. Source: B.C. Vital Statistics Agency, July 2001. Regional analysis of health statistics for Status Indians in British Columbia 1991-1999.

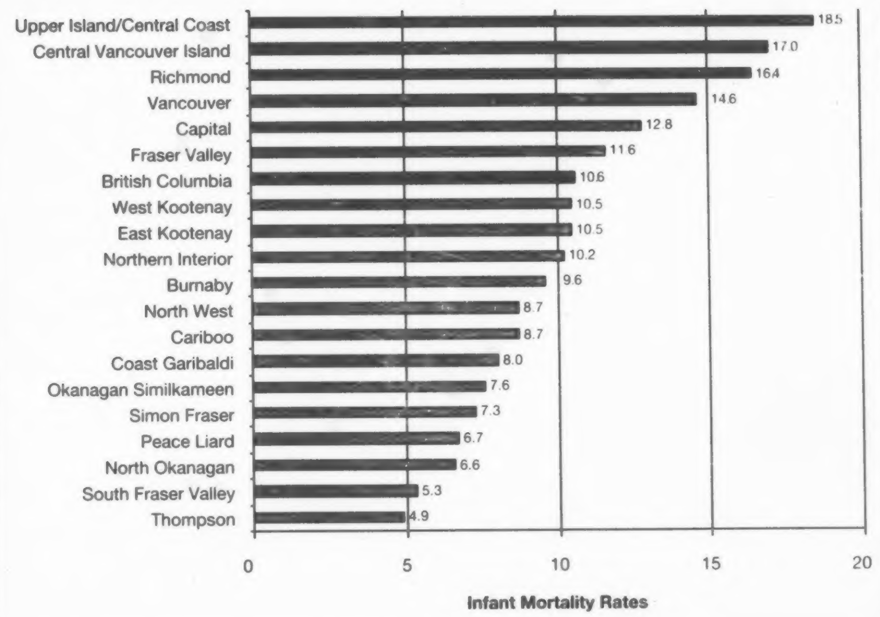
Life Expectancy at Birth for Status Indians by Health Region, 1995 - 1999



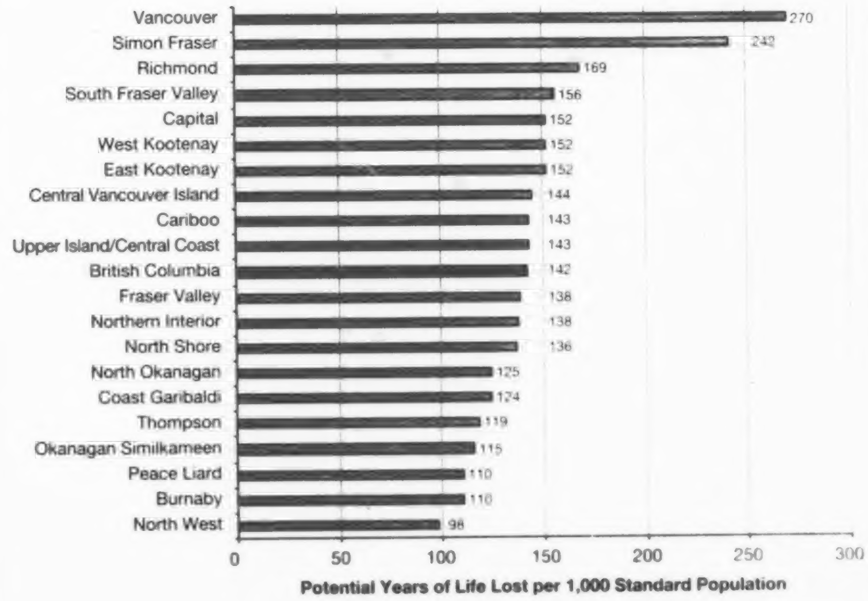
Mortality Rates for Status Indians by Health Region, 1991 - 1999



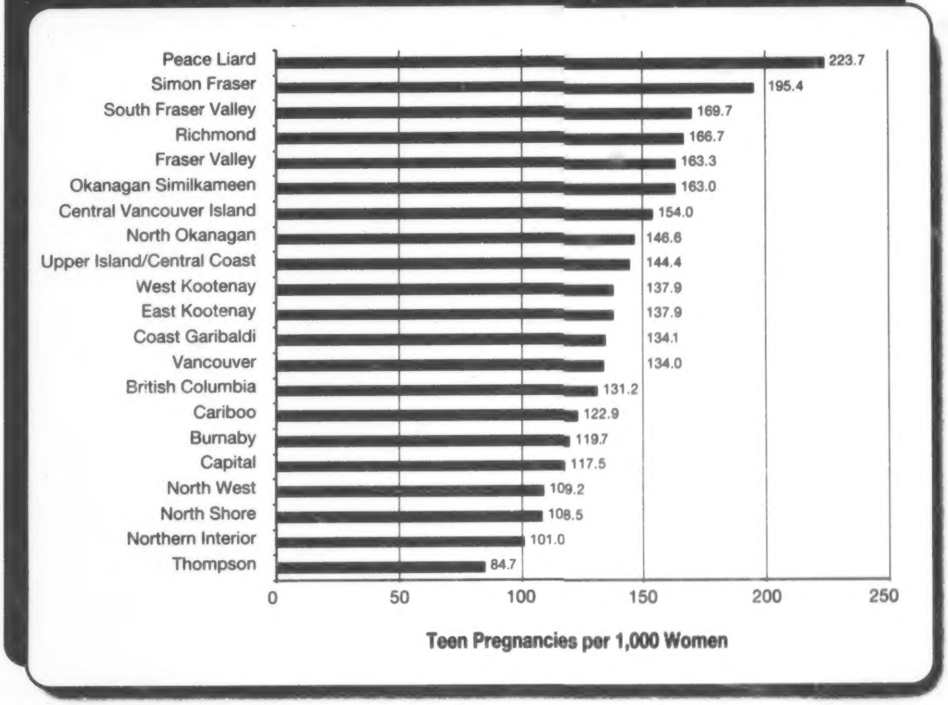
## Infant Mortality Rate for Status Indians by Health Region, 1991 - 1999



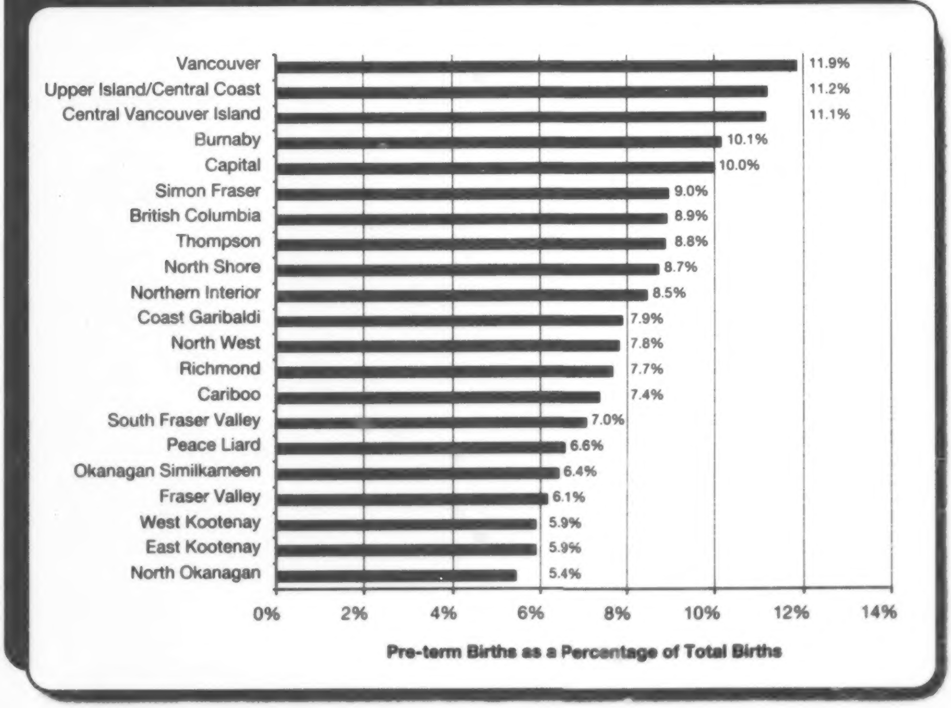
## Potential Years of Life Lost for Status Indians by Health Region, 1991 - 1999



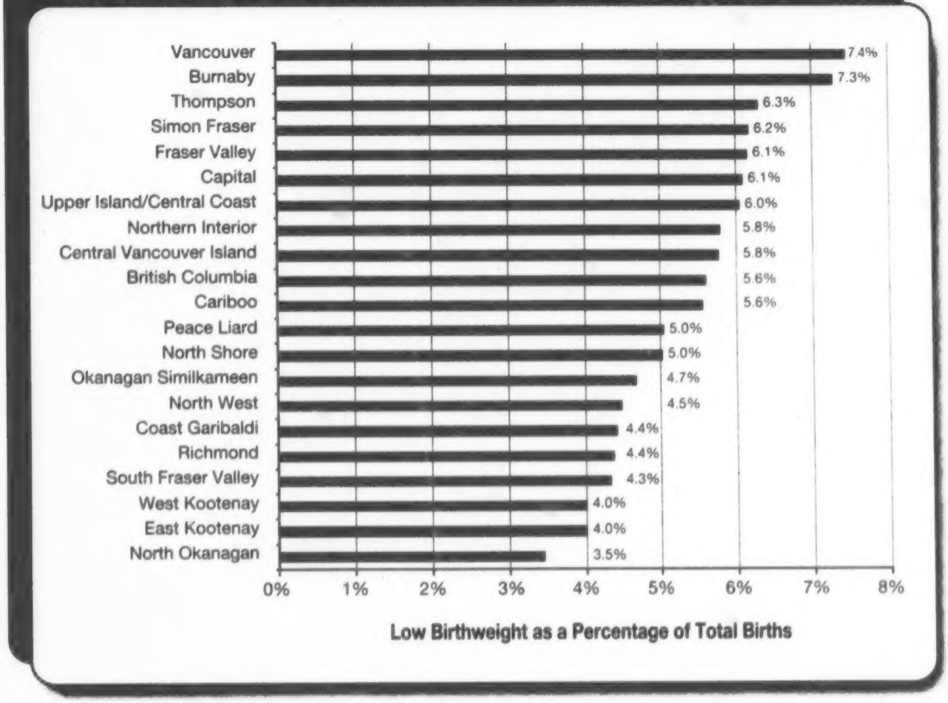
Teen Pregnancy for Status Indians per 1,000 Women by Health Region, 1999



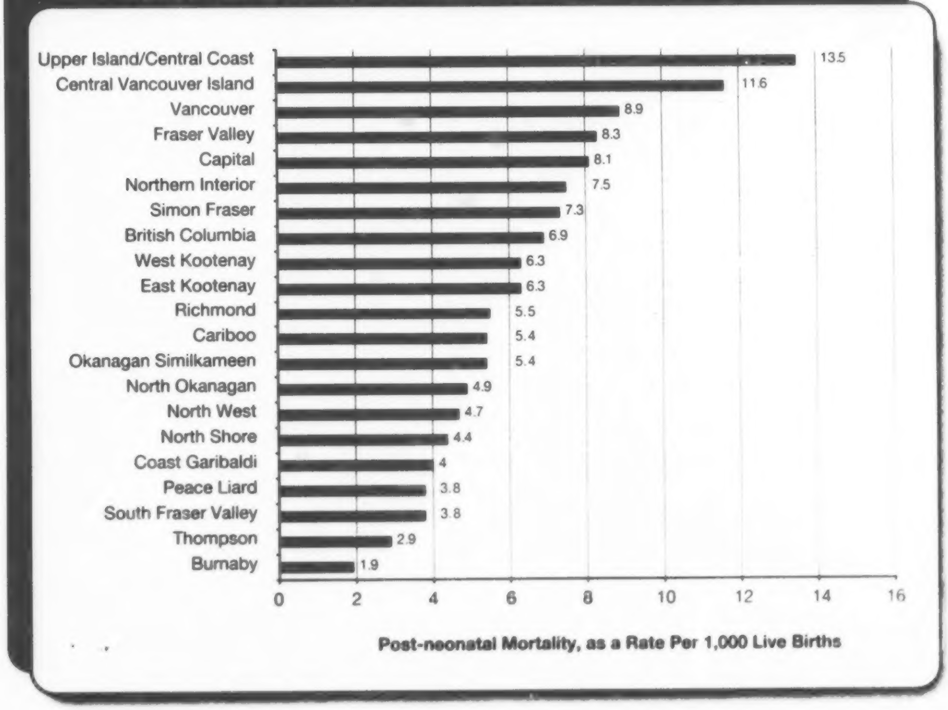
Pre-term Births as a Percentage of Total Births for Status Indians by Health Region, 1991 - 1999



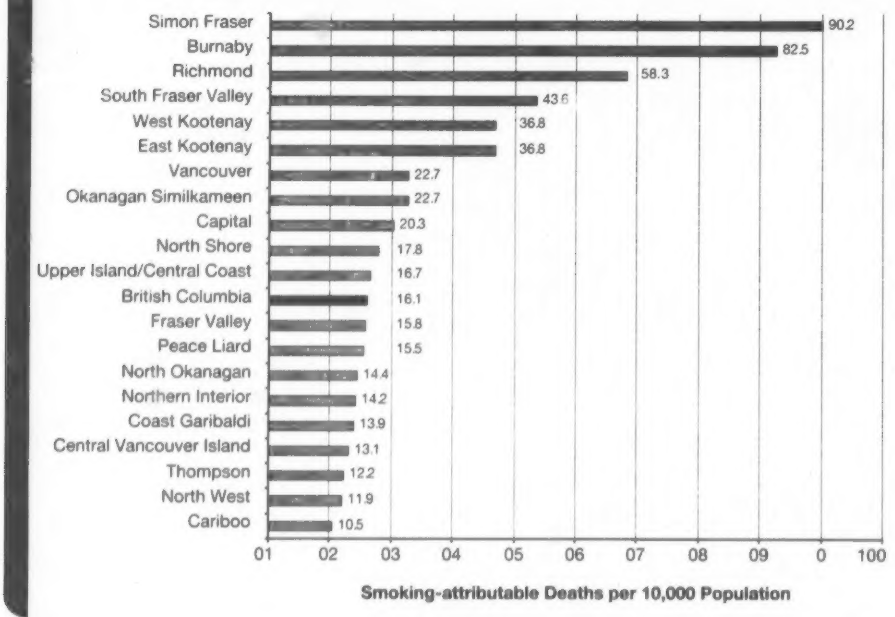
Low Birth Weight as a Percentage of Total Births for Status Indians by Health Region, 1991 - 1999



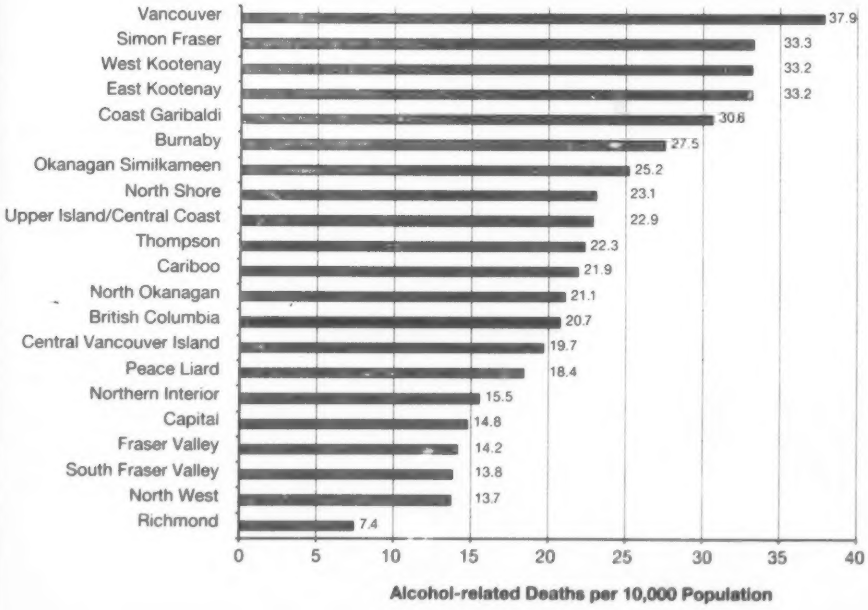
Post-neonatal Mortality for Status Indians by Health Region, 1991 - 1999



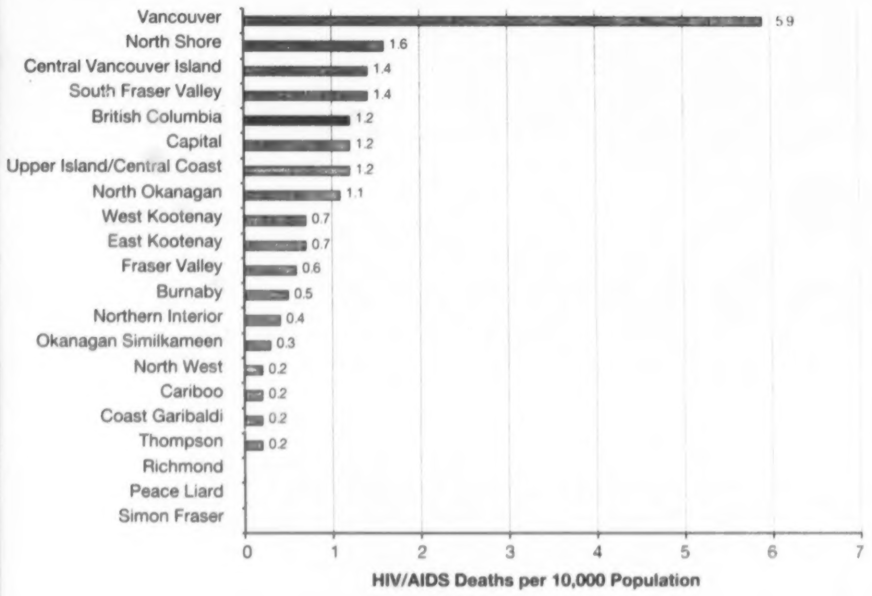
Smoking-attributable Deaths per 10,000 for Status Indians by Health Region, 1991 - 1999



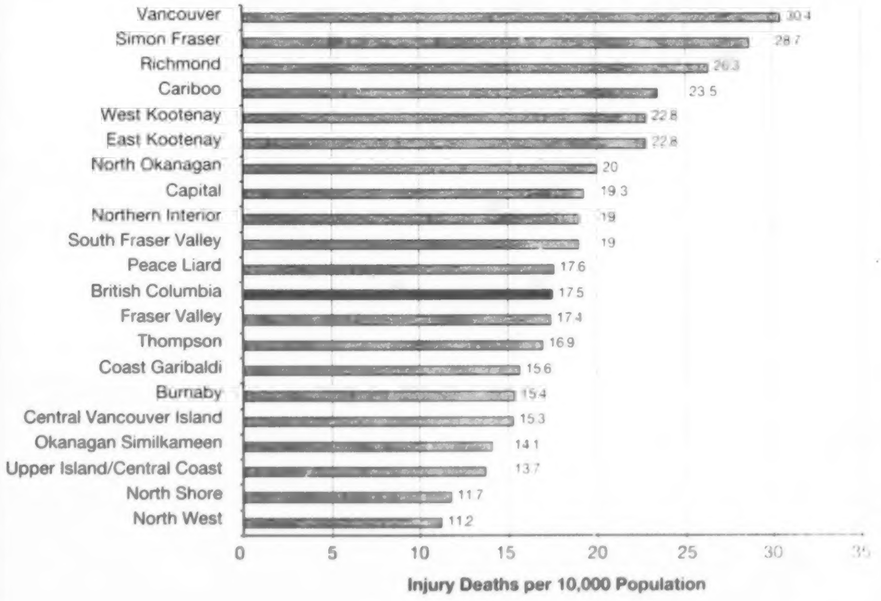
Alcohol-related Deaths per 10,000 for Status Indians by Health Region, 1991 - 1999



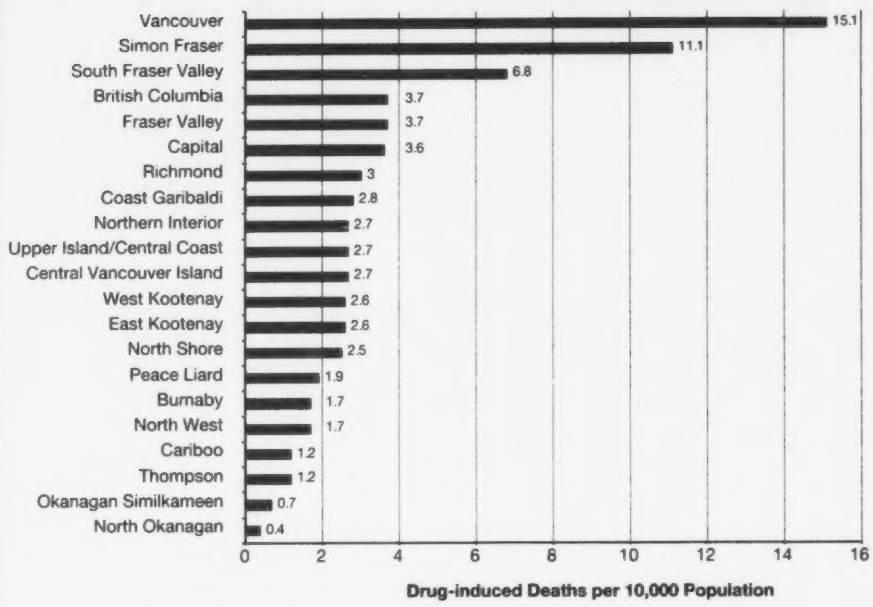
HIV/AIDS Deaths per 10,000 for Status Indians by Health Region, 1991 - 1999



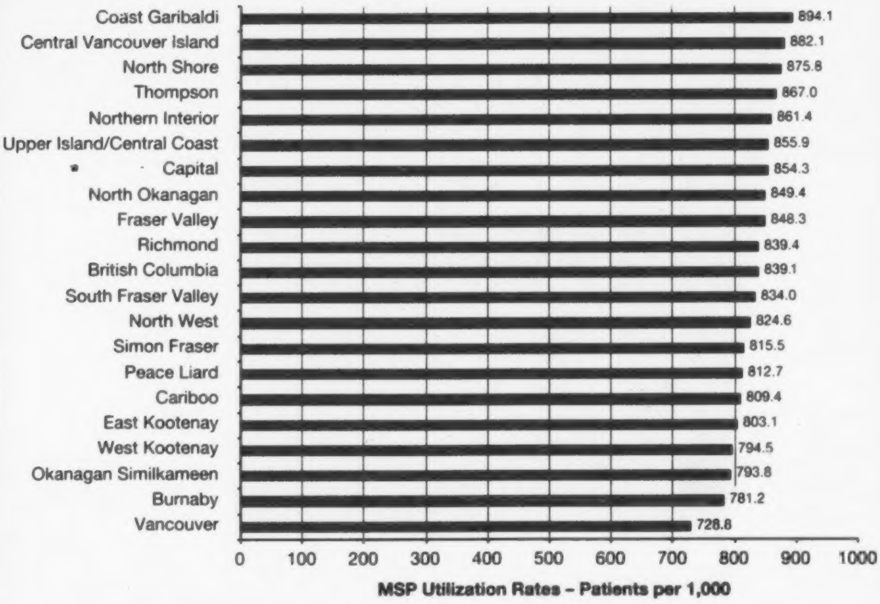
Injury Deaths per 10,000 for Status Indians by Health Region, 1991 - 1999



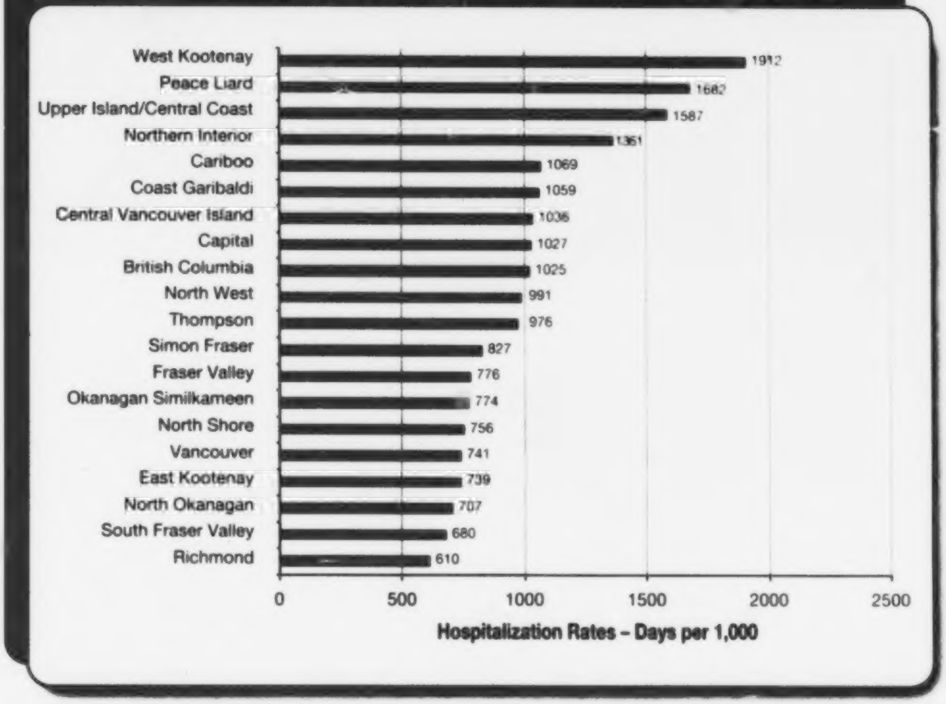
Drug-induced Deaths per 10,000 for Status Indians by Health Region, 1991 - 1999



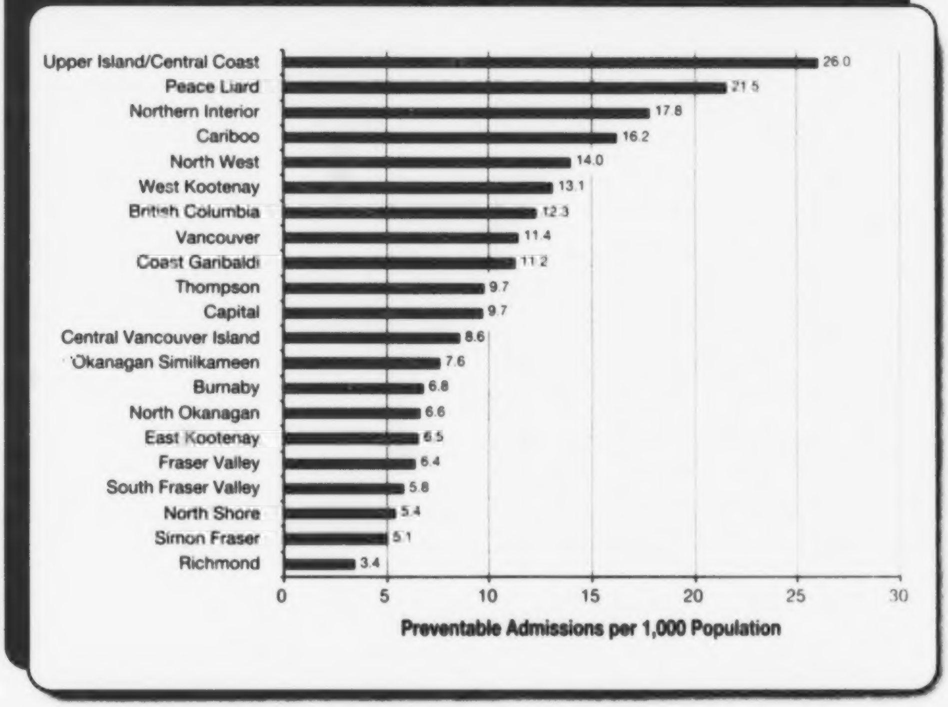
MSP Utilization Rates per 1,000 for Status Indians by Health Region, 2000 - 2001



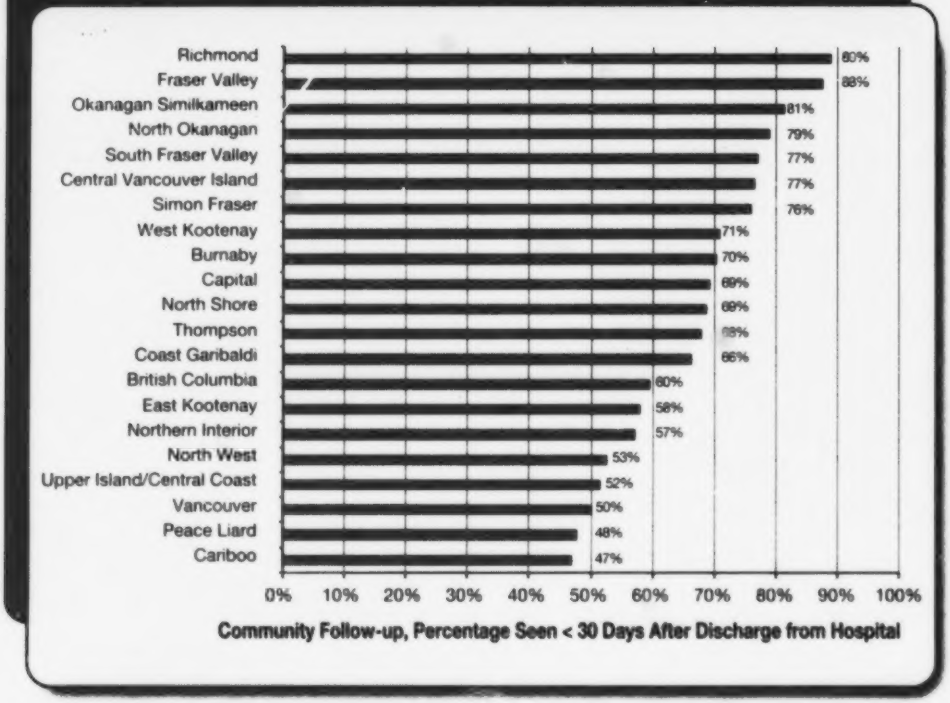
Hospitalization Rates – Days per 1,000 for Status Indians by Health Region 2000 – 2001



Preventable Admissions per 1,000 for Status Indians by Health Region 1997 – 1998 – 2000 – 2001



Community Follow-up, Percentage Seen < 30 Days After Discharge from Hospital, for Status Indians by Health Region, 1997/1998 – 2000/2001



# Appendix F

# Indian Bands by Health Authority, Health Service Delivery Area and Health Region

| HA | Health Authority | HSDA | Health Service Delivery Area | Postal Code | HR | Health Region | INAC Band | Band Name | Affiliation |
|---|---|---|---|---|---|---|---|---|---|
| 01 | Interior | 11 | East Kootenay | V0B1G2 | 01 | East Kootenay | 606 | Lower Kootenay | Ktunaxa/Kinbasket Tribal Council |
| 01 | Interior | 11 | East Kootenay | V1C7E5 | 01 | East Kootenay | 602 | St. Mary's | Ktunaxa/Kinbasket Tribal Council |
| 01 | Interior | 11 | East Kootenay | V0B1R0 | 01 | East Kootenay | 603 | Tobacco Plains | Ktunaxa/Kinbasket Tribal Council |
| 01 | Interior | 11 | East Kootenay | V0B2L0 | 01 | East Kootenay | 604 | Columbia Lake | Ktunaxa/Kinbasket Tribal Council |
| 01 | Interior | 11 | East Kootenay | V0A1K0 | 01 | East Kootenay | 605 | Shuswap | Ktunaxa/Kinbasket Tribal Council |
| 01 | Interior | 13 | Okanagan | V2A6J7 | 04 | Okanagan Similkameen | 597 | Penticton | Okanagan Nation Alliance |
| 01 | Interior | 13 | Okanagan | V1Z3J2 | 04 | Okanagan Similkameen | 601 | Westbank First Nation | Okanagan Nation Alliance |
| 01 | Interior | 13 | Okanagan | V0X1N0 | 04 | Okanagan Similkameen | 598 | Lower Similkameen | Okanagan Nation Alliance |
| 01 | Interior | 13 | Okanagan | V0H1T0 | 04 | Okanagan Similkameen | 596 | Osoyoos | Okanagan Nation Alliance |
| 01 | Interior | 13 | Okanagan | V1T7Z3 | 03 | North Okanagan | 616 | Okanagan | Okanagan Nation Alliance |
| 01 | Interior | 13 | Okanagan | V0E1V0 | 03 | North Okanagan | 600 | Spallumcheen | Unaffiliated Bands |
| 01 | Interior | 13 | Okanagan | V0X1N0 | 04 | Okanagan Similkameen | 599 | Upper Similkameen | Okanagan Nation Alliance |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0L1H0 | 12 | Cariboo | 710 | Alexis Creek | Ts'ilhqot'in National Government |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V1K1N2 | 05 | Thompson | 695 | Lower Nicola | Nicola Tribal Association |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1Z0 | 05 | Thompson | 696 | Nicomen | Fraser Canyon Tribal Administration |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V1K1B8 | 05 | Thompson | 697 | Upper Nicola | Nicola Tribal Association |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V1K1M9 | 05 | Thompson | 698 | Shackan | Nicola Tribal Association |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V1K1N9 | 05 | Thompson | 699 | Nooaitch | Nicola Tribal Association |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1K0 | 05 | Thompson | 703 | High Bar | Shuswap Nation Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1Z0 | 05 | Thompson | 704 | Kanaka Bar | Fraser Canyon Tribal Administration |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1Z0 | 05 | Thompson | 705 | Lytton | Unaffiliated Bands |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1Z0 | 05 | Thompson | 707 | Skuppah | Fraser Canyon Tribal Administration |

# Appendix F

# Indian Bands by Health Authority, Health Service Delivery Area and Health Region

| HA | Health Authority | HSDA | Health Service Delivery Area | Postal Code | HR | Health Region | INAC Band | Band Name | Afilliation |
|---|---|---|---|---|---|---|---|---|---|
| 01 | Interior | 11 | East Kootenay | V0B1G2 | 01 | East Kootenay | 606 | Lower Kootenay | Ktunaxa/Kinbasket Tribal Council |
| 01 | Interior | 11 | East Kootenay | V1C7E5 | 01 | East Kootenay | 602 | St. Mary's | Ktunaxa/Kinbasket Tribal Council |
| 01 | Interior | 11 | East Kootenay | V0B1R0 | 01 | East Kootenay | 603 | Tobacco Plains | Ktunaxa/Kinbasket Tribal Council |
| 01 | Interior | 11 | East Kootenay | V0B2L0 | 01 | East Kootenay | 604 | Columbia Lake | Ktunaxa/Kinbasket Tribal Council |
| 01 | Interior | 11 | East Kootenay | V0A1K0 | 01 | East Kootenay | 605 | Shuswap | Ktunaxa/Kinbasket Tribal Council |
| 01 | Interior | 13 | Okanagan | V2A6J7 | 04 | Okanagan Similkameen | 597 | Penticton | Okanagan Nation Alliance |
| 01 | Interior | 13 | Okanagan | V1Z3J2 | 04 | Okanagan Similkameen | 601 | Westbank First Nation | Okanagan Nation Alliance |
| 01 | Interior | 13 | Okanagan | V0X1N0 | 04 | Okanagan Similkameen | 598 | Lower Similkameen | Okanagan Nation Alliance |
| 01 | Interior | 13 | Okanagan | V0H1T0 | 04 | Okanagan Similkameen | 596 | Osoyoos | Okanagan Nation Alliance |
| 01 | Interior | 13 | Okanagan | V1T7Z3 | 03 | North Okanagan | 616 | Okanagan | Okanagan Nation Alliance |
| 01 | Interior | 13 | Okanagan | V0E1V0 | 03 | North Okanagan | 600 | Spallumcheen | Unaffiliated Bands |
| 01 | Interior | 13 | Okanagan | V0X1N0 | 04 | Okanagan Similkameen | 599 | Upper Similkameen | Okanagan Nation Alliance |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0L1H0 | 12 | Cariboo | 710 | Alexis Creek | Ts'ilhqot'in National Government |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V1K1N2 | 05 | Thompson | 695 | Lower Nicola | Nicola Tribal Association |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1Z0 | 05 | Thompson | 696 | Nicomen | Fraser Canyon Tribal Administration |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V1K1B8 | 05 | Thompson | 697 | Upper Nicola | Nicola Tribal Association |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V1K1M9 | 05 | Thompson | 698 | Shackan | Nicola Tribal Association |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V1K1N9 | 05 | Thompson | 699 | Nooaitch | Nicola Tribal Association |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1K0 | 05 | Thompson | 703 | High Bar | Shuswap Nation Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1Z0 | 05 | Thompson | 704 | Kanaka Bar | Fraser Canyon Tribal Administration |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1Z0 | 05 | Thompson | 705 | Lytton | Unaffiliated Bands |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1Z0 | 05 | Thompson | 707 | Skuppah | Fraser Canyon Tribal Administration |

| HA | Health Authority | HSDA | Health Service Delivery Area | Postal Code | HR | Health Region | INAC Band | Band Name | Affiliation |
|---|---|---|---|---|---|---|---|---|---|
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V2G4M8 | 12 | Cariboo | 716 | Soda Creek | Cariboo Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V2G2V5 | 12 | Cariboo | 711 | Esketemc | Unaffiliated Bands |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K2E0 | 12 | Cariboo | 713 | Canim Lake | Cariboo Tribal Council |
| 01 | Intrenor | 14 | Thompson Cariboo Shuswap | V0K2B0 | 05 | Thompson | 693 | Coldwater | Nicola Tribal Association |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K2L0 | 05 | Thompson | 694 | Cook's Ferry | Nicola Tribal Association |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0L1J0 | 12 | Cariboo | 723 | Canoe Creek | Cariboo Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0L1A0 | 12 | Cariboo | 712 | Tl'etinqox-t'in Government Office | Ts'ilhqot'in National Government |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V2G1M3 | 12 | Cariboo | 719 | Williams Lake | Cariboo Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0L1T0 | 12 | Cariboo | 718 | Toosey | Carrier Chilcotin Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0L1K0 | 12 | Cariboo | 717 | Stone | Ts'ilhqot'in National Government |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1Z0 | 05 | Thompson | 706 | Siska | Nicola Tribal Association |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1H0 | 05 | Thompson | 594 | Pavilion | Lillooet Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1A0 | 05 | Thompson | 692 | Oregon Jack Creek | Fraser Thompson Indian Services Society |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0L1X0 | 12 | Cariboo | 714 | Xeni Gwet'in First Nations Government | Ts'ilhqot'in National Government |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V2C1Z3 | 05 | Thompson | 702 | Whispering Pines/Clinton | Shuswap Nation Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1V0 | 05 | Thompson | 591 | Cayoose Creek | Lillooet Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1V0 | 05 | Thompson | 593 | T'it'q'et | Lillooet Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1V0 | 05 | Thompson | 590 | Bridge River | Lillooet Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0N3C0 | 05 | Thompson | 595 | Seton Lake | Lillooet Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0E1M0 | 05 | Thompson | 684 | Adams Lake | Shuswap Nation Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1A0 | 05 | Thompson | 685 | Ashcroft | Fraser Thompson Indian Services Society |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1H0 | 05 | Thompson | 686 | Bonaparte | Shuswap Nation Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K2J0 | 05 | Thompson | 687 | Skeetchestn | Shuswap Nation Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V2H1H1 | 05 | Thompson | 688 | Kamloops | Shuswap Nation Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0E1M0 | 05 | Thompson | 689 | Little Shuswap Lake | Unaffiliated Bands |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0E1M0 | 05 | Thompson | 690 | Neskonlith | Shuswap Nation Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0E1E0 | 05 | Thompson | 691 | North Thompson | Shuswap Nation Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1V0 | 05 | Thompson | 592 | Fountain | Unaffiliated Bands |
| 02 | Fraser | 21 | Fraser Valley | V0X1L0 | 06 | Fraser Valley | 583 | Chawathil | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V2P7Z9 | 06 | Fraser Valley | 574 | Squiala First Nation | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V3G2J2 | 06 | Fraser Valley | 578 | Sumas First Nation | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V0M1G0 | 06 | Fraser Valley | 579 | Lakahahmen | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V2R1A5 | 06 | Fraser Valley | 580 | Kwaw-kwaw-Apilt | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V0M1A0 | 06 | Fraser Valley | 581 | Seabird Island | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V0X1X0 | 06 | Fraser Valley | 584 | Cheam | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V2R4G5 | 06 | Fraser Valley | 585 | Popkum | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V0X1L0 | 06 | Fraser Valley | 586 | Peters | Unaffiliated Bands |
| 02 | Fraser | 21 | Fraser Valley | V0X1L2 | 06 | Fraser Valley | 587 | Shxw'ow'hamel First Nation | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V0X1L0 | 06 | Fraser Valley | 588 | Union Bar | Unaffiliated Bands |
| 02 | Fraser | 21 | Fraser Valley | V0X1L0 | 06 | Fraser Valley | 589 | Yale First Nation | Unaffiliated Bands |
| 02 | Fraser | 21 | Fraser Valley | V0K2S0 | 06 | Fraser Valley | 708 | Spuzzum | Fraser Thompson Indian Services Society |
| 02 | Fraser | 21 | Fraser Valley | V2P6H7 | 06 | Fraser Valley | 573 | Skwah | Unaffiliated Bands |
| 02 | Fraser | 21 | Fraser Valley | V0K1C0 | 06 | Fraser Valley | 701 | Boston Bar First Nation | Fraser Thompson Indian Services Society |
| 02 | Fraser | 21 | Fraser Valley | V2R1A7 | 06 | Fraser Valley | 571 | Skowkale | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V2P6J4 | 06 | Fraser Valley | 570 | Skway | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V0M1N0 | 06 | Fraser Valley | 568 | Scowlitz | Sto:lo Nation |

# Appendix F • Indian Bands by Health Authority, Health Service Delivery Area and Health Region

| HA | Health Authority | HSDA | Health Service Delivery Area | Postal Code | HR | Health Region | INAC Band | Band Name | Affiliation |
|---|---|---|---|---|---|---|---|---|---|
| 02 | Fraser | 21 | Fraser Valley | V4X3R2 | 06 | Fraser Valley | 565 | Matsqui | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V2V3V5 | 06 | Fraser Valley | 561 | Douglas | Coast Mountain District Council |
| 02 | Fraser | 21 | Fraser Valley | V0M1A0 | 06 | Fraser Valley | 559 | Chehalis | Unaffiliated Bands |
| 02 | Fraser | 21 | Fraser Valley | V2R4H5 | 06 | Fraser Valley | 558 | Aitchelitz | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V0K1C0 | 05 | Thompson | 700 | Boothroyd | Fraser Thompson Indian Services Society |
| 02 | Fraser | 21 | Fraser Valley | V2R1B1 | 06 | Fraser Valley | 576 | Yakweakwioose | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V0M1A2 | 06 | Fraser Valley | 582 | Skawahlook First Nation | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V2R4E2 | 06 | Fraser Valley | 575 | Tzeachten | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V2R4Y2 | 06 | Fraser Valley | 572 | Soowahlie | Sto:lo Nation |
| 02 | Fraser | 22 | Simon Fraser | V3C3V4 | 08 | Simon Fraser | 560 | Kwikwetlem First Nation | Unaffiliated Bands |
| 02 | Fraser | 22 | Simon Fraser | V3Y2G6 | 08 | Simon Fraser | 563 | Katzie | Unaffiliated Bands |
| 02 | Fraser | 22 | Simon Fraser | - | 17 | Burnaby | - | - | - |
| 02 | Fraser | 23 | South Fraser | V4P3C5 | 07 | South Fraser Valley | 569 | Semiahmoo | Unaffiliated Bands |
| 02 | Fraser | 23 | South Fraser | V4M4G2 | 07 | South Fraser Valley | 577 | Tsawwassen First Nation | Alliance Tribal Council |
| 02 | Fraser | 23 | South Fraser | V1M2R4 | 07 | South Fraser Valley | 564 | Kwantlen First Nation | Sto:lo Nation |
| 03 | Vancouver Coastal | 31 | Richmond | - | 19 | Richmond | - | - | - |
| 02 | Fraser | 22 | Simon Fraser | V5R2P5 | 08 | Simon Fraser | 566 | New Westminster | Unaffiliated Bands |
| 03 | Vancouver Coastal | 32 | Vancouver | V6N4C4 | 16 | Vancouver | 550 | Musqueam | Unaffiliated Bands |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V0N2K0 | 06 | Fraser Valley | 567 | Samahquam | Coast Mountain District Council |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V7L4J5 | 18 | North Shore | 555 | Squamish | Unaffiliated Bands |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V0T1C0 | 12 | Cariboo | 539 | Nuxalk Nation | Oweekeno/Kitasoo/Nuxalk Tribal Cou |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V0T1L0 | 11 | Upper Island/Central Coast | 540 | Kitasoo | Oweekeno/Kitasoo/Nuxalk Tribal Council |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V0T1Z0 | 11 | Upper Island/Central Coast | 538 | Heiltsuk | Unaffiliated Bands |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V0N2K0 | 09 | Coast Garibaldi | 557 | Mount Currie | Lillooet Tribal Council |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V0N1L0 | 09 | Coast Garibaldi | 556 | N'Quatqua | Coast Mountain District Council |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V0N3A0 | 09 | Coast Garibaldi | 551 | Sechelt | Unaffiliated Bands |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V7H1B3 | 18 | North Shore | 549 | Burrard | Alliance Tribal Council |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V0N2L0 | 06 | Fraser Valley | 562 | Skookumchuck | Coast Mountain District Council |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V8A4Z3 | 09 | Coast Garibaldi | 554 | Sliammon | Alliance Tribal Council |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V0L1C0 | 12 | Cariboo | 722 | Ulkatcho | Carrier Chilcotin Tribal Council |
| 04 | Vancouver Island | 41 | South Vancouver Island | V9A2R1 | 20 | Capital | 656 | Songhees First Nation | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V9A2B7 | 10 | Central Vancouver Island | 643 | Lake Cowichan First Nation | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V0S1N0 | 20 | Capital | 657 | T'Sou-ke First Nation | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V8L5S4 | 20 | Capital | 655 | Tseycum | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V8M2C3 | 20 | Capital | 654 | Tsawout First Nation | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V8M1R3 | 20 | Capital | 653 | Tsartlip | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V8L5W4 | 20 | Capital | 652 | Pauquachin | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V9A7K7 | 20 | Capital | 644 | Esquimalt | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V0S1N0 | 20 | Capital | 640 | Beecher Bay | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V0R2P0 | 10 | Central Vancouver Island | 647 | Malahat First Nation | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V9L5J1 | 10 | Central Vancouver Island | 642 | Cowichan | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V0S1K0 | 20 | Capital | 658 | Pacheedaht First Nation | Unaffiliated Bands |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V9K1Z5 | 10 | Central Vancouver Island | 651 | Qualicum First Nation | Unaffiliated Bands |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V9Y7M8 | 10 | Central Vancouver Island | 662 | Ditidaht | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V9N3P8 | 11 | Upper Island/Central Coast | 624 | Comox | Kwakiutl District Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R3A0 | 10 | Central Vancouver Island | 668 | Ucluelet First Nation | Nuu-Chah-Nulth Tribal Council |

| HA | Health Authority | HSDA | Health Service Delivery Area | Postal Code | HR | Health Region | INAC Band | Band Name | Affiliation |
|---|---|---|---|---|---|---|---|---|---|
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V2G4M8 | 12 | Cariboo | 716 | Soda Creek | Cariboo Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V2G2V5 | 12 | Cariboo | 711 | Esketemc | Unaffiliated Bands |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K2E0 | 12 | Cariboo | 713 | Canim Lake | Cariboo Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K2B0 | 05 | Thompson | 693 | Coldwater | Nicola Tribal Association |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K2L0 | 05 | Thompson | 694 | Cook's Ferry | Nicola Tribal Association |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0L1J0 | 12 | Cariboo | 723 | Canoe Creek | Cariboo Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0L1A0 | 12 | Cariboo | 712 | Tl'etinqox-t'in Government Office | Ts'ilhqot'in National Government |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V2G1M3 | 12 | Cariboo | 719 | Williams Lake | Cariboo Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0L1T0 | 12 | Cariboo | 718 | Toosey | Carrier Chilcotin Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0L1K0 | 12 | Cariboo | 717 | Stone | Ts'ilhqot'in National Government |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1Z0 | 05 | Thompson | 706 | Siska | Nicola Tribal Association |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1H0 | 05 | Thompson | 594 | Pavilion | Lillooet Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1A0 | 05 | Thompson | 692 | Oregon Jack Creek | Fraser Thompson Indian Services Society |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0L1X0 | 12 | Cariboo | 714 | Xeni Gwet'in First Nations Government | Ts'ilhqot'in National Government |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V2C1Z3 | 05 | Thompson | 702 | Whispering Pines/Clinton | Shuswap Nation Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1V0 | 05 | Thompson | 591 | Cayoose Creek | Lillooet Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1V0 | 05 | Thompson | 593 | T'it'q'et | Lillooet Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1V0 | 05 | Thompson | 590 | Bridge River | Lillooet Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0N3C0 | 05 | Thompson | 595 | Seton Lake | Lillooet Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0E1M0 | 05 | Thompson | 684 | Adams Lake | Shuswap Nation Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1A0 | 05 | Thompson | 685 | Ashcroft | Fraser Thompson Indian Services Society |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1H0 | 05 | Thompson | 686 | Bonaparte | Shuswap Nation Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K2J0 | 05 | Thompson | 687 | Skeetchestn | Shuswap Nation Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V2H1H1 | 05 | Thompson | 688 | Kamloops | Shuswap Nation Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0E1M0 | 05 | Thompson | 689 | Little Shuswap Lake | Unaffiliated Bands |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0E1M0 | 05 | Thompson | 690 | Neskonlith | Shuswap Nation Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0E1E0 | 05 | Thompson | 691 | North Thompson | Shuswap Nation Tribal Council |
| 01 | Interior | 14 | Thompson Cariboo Shuswap | V0K1V0 | 05 | Thompson | 592 | Fountain | Unaffiliated Bands |
| 02 | Fraser | 21 | Fraser Valley | V0X1L0 | 06 | Fraser Valley | 583 | Chawathil | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V2P7Z9 | 06 | Fraser Valley | 574 | Squiala First Nation | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V3G2J2 | 06 | Fraser Valley | 578 | Sumas First Nation | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V0M1G0 | 06 | Fraser Valley | 579 | Lakahahmen | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V2R1A5 | 06 | Fraser Valley | 580 | Kwaw-kwaw-Apilt | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V0M1A0 | 06 | Fraser Valley | 581 | Seabird Island | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V0X1X0 | 06 | Fraser Valley | 584 | Cheam | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V2R4G5 | 06 | Fraser Valley | 585 | Popkum | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V0X1L0 | 06 | Fraser Valley | 586 | Peters | Unaffiliated Bands |
| 02 | Fraser | 21 | Fraser Valley | V0X1L2 | 06 | Fraser Valley | 587 | Shxw'ow'hamel First Nation | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V0X1L0 | 06 | Fraser Valley | 588 | Union Bar | Unaffiliated Bands |
| 02 | Fraser | 21 | Fraser Valley | V0X1L0 | 06 | Fraser Valley | 589 | Yale First Nation | Unaffiliated Bands |
| 02 | Fraser | 21 | Fraser Valley | V0K2S0 | 06 | Fraser Valley | 708 | Spuzzum | Fraser Thompson Indian Services Society |
| 02 | Fraser | 21 | Fraser Valley | V2P6H7 | 06 | Fraser Valley | 573 | Skwah | Unaffiliated Bands |
| 02 | Fraser | 21 | Fraser Valley | V0K1C0 | 06 | Fraser Valley | 701 | Boston Bar First Nation | Fraser Thompson Indian Services Society |
| 02 | Fraser | 21 | Fraser Valley | V2R1A7 | 06 | Fraser Valley | 571 | Skowkale | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V2P6J4 | 06 | Fraser Valley | 570 | Skway | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V0M1N0 | 06 | Fraser Valley | 568 | Scowlitz | Sto:lo Nation |

# Appendix F • Indian Bands by Health Authority, Health Service Delivery Area and Health Region

| HA | Health Authority | HSDA | Health Service Delivery Area | Postal Code | HR | Health Region | INAC Band | Band Name | Affiliation |
|---|---|---|---|---|---|---|---|---|---|
| 02 | Fraser | 21 | Fraser Valley | V4X3R2 | 06 | Fraser Valley | 565 | Matsqui | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V2V3V5 | 06 | Fraser Valley | 581 | Douglas | Coast Mountain District Council |
| 02 | Fraser | 21 | Fraser Valley | V0M1A0 | 06 | Fraser Valley | 559 | Chehalis | Unaffiliated Bands |
| 02 | Fraser | 21 | Fraser Valley | V2R4H5 | 06 | Fraser Valley | 558 | Aitchelitz | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V0K1C0 | 05 | Thompson | 700 | Boothroyd | Fraser Thompson Indian Services Society |
| 02 | Fraser | 21 | Fraser Valley | V2R1B1 | 06 | Fraser Valley | 576 | Yakweakwioose | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V0M1A2 | 06 | Fraser Valley | 582 | Skawahlook First Nation | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V2R4E2 | 06 | Fraser Valley | 575 | Tzeachten | Sto:lo Nation |
| 02 | Fraser | 21 | Fraser Valley | V2R4Y2 | 06 | Fraser Valley | 572 | Soowahlie | Sto:lo Nation |
| 02 | Fraser | 22 | Simon Fraser | V3C3N4 | 08 | Simon Fraser | 560 | Kwikwetlem First Nation | Unaffiliated Bands |
| 02 | Fraser | 22 | Simon Fraser | V3Y2G6 | 08 | Simon Fraser | 563 | Katzie | Unaffiliated Bands |
| 02 | Fraser | 22 | Simon Fraser | - | 17 | Burnaby | - | - | - |
| 02 | Fraser | 23 | South Fraser | V4P3C5 | 07 | South Fraser Valley | 569 | Semiahmoo | Unaffiliated Bands |
| 02 | Fraser | 23 | South Fraser | V4M4G2 | 07 | South Fraser Valley | 577 | Tsawwassen First Nation | Alliance Tribal Council |
| 02 | Fraser | 23 | South Fraser | V1M2R4 | 07 | South Fraser Valley | 564 | Kwantlen First Nation | Sto:lo Nation |
| 03 | Vancouver Coastal | 31 | Richmond | - | 19 | Richmond | - | - | - |
| 02 | Fraser | 22 | Simon Fraser | V5R2P5 | 08 | Simon Fraser | 566 | New Westminster | Unaffiliated Bands |
| 03 | Vancouver Coastal | 32 | Vancouver | V6N4C4 | 16 | Vancouver | 550 | Musqueam | Unaffiliated Bands |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V0N2K0 | 06 | Fraser Valley | 567 | Samahquam | Coast Mountain District Council |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V7L4J5 | 18 | North Shore | 555 | Squamish | Unaffiliated Bands |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V0T1C0 | 12 | Cariboo | 539 | Nuxalk Nation | Oweekeno/Kitasoo/Nuxalk Tribal Cou |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V0T1L0 | 11 | Upper Island/Central Coast | 540 | Kitasoo | Oweekeno/Kitasoo/Nuxalk Tribal Council |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V0T1Z0 | 11 | Upper Island/Central Coast | 538 | Heiltsuk | Unaffiliated Bands |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V0N2K0 | 09 | Coast Garibaldi | 557 | Mount Currie | Lillooet Tribal Council |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V0N1L0 | 09 | Coast Garibaldi | 556 | N'Quatqua | Coast Mountain District Council |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V0N3A0 | 09 | Coast Garibaldi | 551 | Sechelt | Unaffiliated Bands |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V7H1B3 | 18 | North Shore | 549 | Burrard | Alliance Tribal Council |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V0N2L0 | 06 | Fraser Valley | 562 | Skookumchuck | Coast Mountain District Council |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V8A4Z3 | 09 | Coast Garibaldi | 554 | Sliammon | Alliance Tribal Council |
| 03 | Vancouver Coastal | 33 | North Shore/Coast Garibaldi | V0L1C0 | 12 | Cariboo | 722 | Ulkatcho | Carrier Chilcotin Tribal Council |
| 04 | Vancouver Island | 41 | South Vancouver Island | V9A2R1 | 20 | Capital | 656 | Songhees First Nation | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V9A2B7 | 10 | Central Vancouver Island | 643 | Lake Cowichan First Nation | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V0S1N0 | 20 | Capital | 657 | T'Sou-ke First Nation | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V8L5S4 | 20 | Capital | 655 | Tseycum | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V8M2C3 | 20 | Capital | 654 | Tsawout First Nation | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V8M1R3 | 20 | Capital | 653 | Tsartlip | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V8L5W4 | 20 | Capital | 652 | Pauquachin | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V9A7K7 | 20 | Capital | 644 | Esquimalt | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V0S1N0 | 20 | Capital | 640 | Beecher Bay | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V0R2P0 | 10 | Central Vancouver Island | 647 | Malahat First Nation | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V9L5J1 | 10 | Central Vancouver Island | 642 | Cowichan | Unaffiliated Bands |
| 04 | Vancouver Island | 41 | South Vancouver Island | V0S1N0 | 20 | Capital | 658 | Pacheedaht First Nation | Unaffiliated Bands |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V9K1Z5 | 10 | Central Vancouver Island | 651 | Qualicum First Nation | Unaffiliated Bands |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V9Y7M8 | 10 | Central Vancouver Island | 682 | Ditidaht | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V9N3P8 | 11 | Upper Island/Central Coast | 624 | Comox | Kwakiutl District Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R3A0 | 10 | Central Vancouver Island | 668 | Ucluelet First Nation | Nuu-Chah-Nulth Tribal Council |

# Appendix F • Indian Bands by Health Authority, Health Service Delivery Area and Health Region

| HA | Health Authority | HSDA | Health Service Delivery Area | Postal Code | HR | Health Region | INAC Band | Band Name | Afilliation |
|---|---|---|---|---|---|---|---|---|---|
| 04 | Vancouver Island | 42 | Central Vancouver Island | V9Y7L9 | 10 | Central Vancouver Island | 667 | Uchucklesaht | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R3A0 | 10 | Central Vancouver Island | 666 | Toquaht | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V9Y7M1 | 10 | Central Vancouver Island | 665 | Tseshaht | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V9Y7M7 | 10 | Central Vancouver Island | 664 | Hupacasath First Nation | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R1B0 | 10 | Central Vancouver Island | 663 | Huu-ay-aht First Nations | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R1K0 | 10 | Central Vancouver Island | 645 | Halalt | Alliance Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R2Z0 | 10 | Central Vancouver Island | 660 | Tla-o-qui-aht First Nations | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V9G1M5 | 10 | Central Vancouver Island | 641 | Chemainus First Nation | Alliance Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R2Z0 | 10 | Central Vancouver Island | 661 | Hesquiaht | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R1K0 | 10 | Central Vancouver Island | 646 | Lyackson | Unaffiliated Bands |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V9R4Z4 | 10 | Central Vancouver Island | 648 | Snuneymuxw First Nation | Alliance Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R2H0 | 10 | Central Vancouver Island | 649 | Nanoose First Nation | Unaffiliated Bands |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R1K0 | 10 | Central Vancouver Island | 650 | Penelakut | Unaffiliated Bands |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R1A0 | 10 | Central Vancouver Island | 659 | Ahousaht | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0P2A0 | 11 | Upper Island/Central Coast | 639 | Nuchatlaht | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0N1A0 | 11 | Upper Island/Central Coast | 631 | Namgis First Nation | Musgamagw Tsawataineuk Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0P1J0 | 11 | Upper Island/Central Coast | 638 | Ka:'yu:'k't'h'/Che:k:tles7et'h' First Nations | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V9W8C9 | 11 | Upper Island/Central Coast | 637 | Tlowitsis Tribe | Unaffiliated Bands |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0N2B0 | 11 | Upper Island/Central Coast | 636 | Tsawataineuk | Musgamagw Tsawataineuk Tribal Coun |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0N1A0 | 11 | Upper Island/Central Coast | 635 | Da'naxda'xw First Nation | Kwakiutl District Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0P2A0 | 11 | Upper Island/Central Coast | 634 | Ehattesaht | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0N1K0 | 11 | Upper Island/Central Coast | 633 | Quatsino | Kwakiutl District Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0N2P0 | 11 | Upper Island/Central Coast | 632 | Tlatlasikwala | Kwakiutl District Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0N2P0 | 11 | Upper Island/Central Coast | 724 | Gwa'Sala-Nakwaxda'xw | Kwakiutl District Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V9W5W8 | 11 | Upper Island/Central Coast | 622 | Campbell River | Kwakiutl District Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0P1G0 | 11 | Upper Island/Central Coast | 630 | Mowachaht/Muchalaht | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0P1K0 | 11 | Upper Island/Central Coast | 553 | Klahoose First Nation | Alliance Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0N2P0 | 11 | Upper Island/Central Coast | 541 | Oweekeno | Oweekeno/Kitasoo/Nuxalk Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0P1N0 | 11 | Upper Island/Central Coast | 623 | Cape Mudge | Kwakiutl District Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0P1S0 | 11 | Upper Island/Central Coast | 625 | Kwicksutaineuk-ah-kwaw-ah-mish | Musgamagw Tsawataineuk Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0N2P0 | 11 | Upper Island/Central Coast | 626 | Kwakiutl | Kwakiutl District Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0N2R0 | 11 | Upper Island/Central Coast | 627 | Gwawaenuk Tribe | Musgamagw Tsawataineuk Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V9W2E3 | 11 | Upper Island/Central Coast | 628 | Kwiakah | Kwakiutl District Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V9W2E4 | 11 | Upper Island/Central Coast | 629 | Mamalilikulla-Qwe'Qwa'Sot'Em | Kwakiutl District Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V9H1G5 | 11 | Upper Island/Central Coast | 552 | Homalco | Alliance Tribal Council |
| 05 | Northern | 51 | Northwest | V0J1X0 | 13 | North West | 678 | Nisga'a Village of Laxgalt'sap | Nisga'a Tribal Council |
| 05 | Northern | 51 | Northwest | V0V1H0 | 13 | North West | 674 | Lax-kw'alaams | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V0V1A0 | 13 | North West | 675 | Hartley Bay | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V0T2B0 | 13 | North West | 676 | Kitamaat | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V0J1A0 | 13 | North West | 677 | Nisga'a Village of New Aiyansh | Nisga'a Tribal Council |
| 05 | Northern | 51 | Northwest | V0J3T0 | 13 | North West | 679 | Nisga'a Village of Gitwinksihlkw | Nisga'a Tribal Council |
| 05 | Northern | 51 | Northwest | V8G4B5 | 13 | North West | 681 | Kitsumkalum | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V8J3R2 | 13 | North West | 673 | Metlakatla | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V0J1K0 | 13 | North West | 683 | Iskut | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V8G3X6 | 13 | North West | 680 | Kitselas | Unaffiliated Bands |

# Appendix F • Indian Bands by Health Authority, Health Service Delivery Area and Health Region

| HA | Health Authority | HSDA | Health Service Delivery Area | Postal Code | HR | Health Region | INAC Band | Band Name | Affiliation |
|---|---|---|---|---|---|---|---|---|---|
| 05 | Northern | 51 | Northwest | V0J2N0 | 13 | North West | 530 | Moricetown | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V0J2J0 | 13 | North West | 534 | Hagwilget Village | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V0V1C0 | 13 | North West | 672 | Kitkatla | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V0J2W0 | 13 | North West | 682 | Tahltan | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V0J1Y0 | 13 | North West | 533 | Glen Vowell | Gitksan-Wet-Suwet'en Government Council |
| 05 | Northern | 51 | Northwest | V0J1Y0 | 13 | North West | 531 | Gitanmaax | Gitksan-Wet-Suwet'en Government Council |
| 05 | Northern | 51 | Northwest | V0J2R0 | 13 | North West | 535 | Gitsegukla | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V0J2A0 | 13 | North West | 536 | Gitwangak | Gitksan-Wet-Suwet'en Government Council |
| 05 | Northern | 51 | Northwest | V0J2A0 | 13 | North West | 537 | Gitanyow | Gitksan-Wet-Suwet'en Government Council |
| 05 | Northern | 51 | Northwest | V0T1M0 | 13 | North West | 669 | Old Massett Village Council | Haida Tribal Society |
| 05 | Northern | 51 | Northwest | V0T1S1 | 13 | North West | 670 | Skidegate | Haida Tribal Society |
| 05 | Northern | 51 | Northwest | V0V1B0 | 13 | North West | 671 | Nisga'a Village of Gingolx | Nisga'a Tribal Council |
| 05 | Northern | 51 | Northwest | V0J1Y0 | 13 | North West | 532 | Kispiox | Gitksan-Wet-Suwet'en Government Council |
| 05 | Northern | 52 | Northern Interior | V0J1E0 | 15 | Northern Interior | 725 | Wet'suwet'en First Nation | Carrier Sekani Tribal Council |
| 05 | Northern | 52 | Northern Interior | V0J2G0 | 15 | Northern Interior | 618 | McLeod Lake | Unaffiliated Bands |
| 05 | Northern | 52 | Northern Interior | V0J1E0 | 15 | Northern Interior | 619 | Burns Lake | Carrier Sekani Tribal Council |
| 05 | Northern | 52 | Northern Interior | V0J1E0 | 15 | Northern Interior | 620 | Cheslatta Carrier Nation | Unaffiliated Bands |
| 05 | Northern | 52 | Northern Interior | V0J1E0 | 15 | Northern Interior | 726 | Nee-Tahi-Buhn | Unaffiliated Bands |
| 05 | Northern | 52 | Northern Interior | V0J2P0 | 15 | Northern Interior | 729 | Skin Tyee | Unaffiliated Bands |
| 05 | Northern | 52 | Northern Interior | V2L5S4 | 15 | Northern Interior | 728 | Yekooche | Unaffiliated Bands |
| 05 | Northern | 52 | Northern Interior | V0J1P0 | 15 | Northern Interior | 617 | Tl'azt'en Nation | Carrier Sekani Tribal Council |
| 05 | Northern | 52 | Northern Interior | V2J3H6 | 12 | Cariboo | 709 | Alexandria | Ts'ilhqot'in National Government |
| 05 | Northern | 52 | Northern Interior | V0J1N0 | 15 | Northern Interior | 612 | Nadleh Whuten | Carrier Sekani Tribal Council |
| 05 | Northern | 52 | Northern Interior | V2K5G5 | 15 | Northern Interior | 611 | Lheidli T'enneh | Unaffiliated Bands |
| 05 | Northern | 52 | Northern Interior | V2J3P7 | 12 | Cariboo | 720 | Nazko | Carrier Chilcotin Tribal Council |
| 05 | Northern | 52 | Northern Interior | V0J1S0 | 15 | Northern Interior | 613 | Stellat'en First Nation | Carrier Sekani Tribal Council |
| 05 | Northern | 52 | Northern Interior | V2L3H1 | 15 | Northern Interior | 610 | Kwadacha | Unaffiliated Bands |
| 05 | Northern | 52 | Northern Interior | V2L2Y8 | 15 | Northern Interior | 609 | Tsay Keh Dene | Unaffiliated Bands |
| 05 | Northern | 52 | Northern Interior | V2L3N2 | 15 | Northern Interior | 608 | Takla Lake First Nation | Carrier Sekani Tribal Council |
| 05 | Northern | 52 | Northern Interior | V0J1E0 | 15 | Northern Interior | 607 | Lake Babine Nation | Unaffiliated Bands |
| 05 | Northern | 52 | Northern Interior | V2J3J8 | 12 | Cariboo | 721 | Kluskus | Carrier Chilcotin Tribal Council |
| 05 | Northern | 52 | Northern Interior | V0J3A0 | 15 | Northern Interior | 615 | Saik'uz First Nation | Carrier Sekani Tribal Council |
| 05 | Northern | 52 | Northern Interior | V0J1P0 | 15 | Northern Interior | 614 | Nak'azdli | Carrier Sekani Tribal Council |
| 05 | Northern | 52 | Northern Interior | V2J3J9 | 12 | Cariboo | 715 | Red Bluff | Carrier Chilcotin Tribal Council |
| 05 | Northern | 53 | Northeast | V1J1Y7 | 14 | Peace Liard | 547 | Blueberry River First Nations | Treaty 8 Tribal Association |
| 05 | Northern | 53 | Northeast | V0C2N0 | 14 | Peace Liard | 546 | Halfway River First Nation | Treaty 8 Tribal Association |
| 05 | Northern | 53 | Northeast | V0C1X0 | 14 | Peace Liard | 545 | West Moberly First Nations | Unaffiliated Bands |
| 05 | Northern | 53 | Northeast | V0C1R0 | 14 | Peace Liard | 544 | Prophet River Band, Dene Tsaa Tse K'Nai First Nation | Treaty 8 Tribal Association |
| 05 | Northern | 53 | Northeast | V0C2H0 | 14 | Peace Liard | 548 | Doig River | Treaty 8 Tribal Association |
| 05 | Northern | 53 | Northeast | V0C1X0 | 14 | Peace Liard | 542 | Saulteau First Nations | Treaty 8 Tribal Association |
| 05 | Northern | 53 | Northeast | V0C1R0 | 14 | Peace Liard | 543 | Fort Nelson First Nation | Unaffiliated Bands |

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First Nations Profiles. Indian and Northern Affairs Canada.

# Appendix F • Indian Bands by Health Authority, Health Service Delivery Area and Health Region

| HA | Health Authority | HSDA | Health Service Delivery Area | Postal Code | HR | Health Region | INAC Band | Band Name | Afilliation |
|---|---|---|---|---|---|---|---|---|---|
| 04 | Vancouver Island | 42 | Central Vancouver Island | V9Y7L9 | 10 | Central Vancouver Island | 667 | Uchucklesaht | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R3A0 | 10 | Central Vancouver Island | 666 | Toquaht | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V9Y7M1 | 10 | Central Vancouver Island | 665 | Tseshaht | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V9Y7M7 | 10 | Central Vancouver Island | 664 | Hupacasath First Nation | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R1B0 | 10 | Central Vancouver Island | 663 | Huu-ay-aht First Nations | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R1K0 | 10 | Central Vancouver Island | 645 | Halalt | Alliance Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R2Z0 | 10 | Central Vancouver Island | 660 | Tla-o-qui-aht First Nations | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V9G1M5 | 10 | Central Vancouver Island | 641 | Chemainus First Nation | Alliance Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R2Z0 | 10 | Central Vancouver Island | 661 | Hesquiaht | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R1K0 | 10 | Central Vancouver Island | 646 | Lyackson | Unaffiliated Bands |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V9R4Z4 | 10 | Central Vancouver Island | 648 | Snuneymuxw First Nation | Alliance Tribal Council |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R2H0 | 10 | Central Vancouver Island | 649 | Nanoose First Nation | Unaffiliated Bands |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R1K0 | 10 | Central Vancouver Island | 650 | Penelakut | Unaffiliated Bands |
| 04 | Vancouver Island | 42 | Central Vancouver Island | V0R1A0 | 10 | Central Vancouver Island | 659 | Ahousaht | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0P2A0 | 11 | Upper Island/Central Coast | 639 | Nuchatlaht | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0N1A0 | 11 | Upper Island/Central Coast | 631 | Namgis First Nation | Musgamagw Tsawataineuk Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0P1J0 | 11 | Upper Island/Central Coast | 638 | Ka'yu'k't'h'/Che'k'tles7et'h' First Nations | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V9W8C9 | 11 | Upper Island/Central Coast | 637 | Tlowitsis Tribe | Unaffiliated Bands |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0N2B0 | 11 | Upper Island/Central Coast | 636 | Tsawataineuk | Musgamagw Tsawataineuk Tribal Coun |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0N1A0 | 11 | Upper Island/Central Coast | 635 | Da'naxda'xw First Nation | Kwakiutl District Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0P2A0 | 11 | Upper Island/Central Coast | 634 | Ehattesaht | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0N1K0 | 11 | Upper Island/Central Coast | 633 | Quatsino | Kwakiutl District Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0N2P0 | 11 | Upper Island/Central Coast | 632 | Tlatlasikwala | Kwakiutl District Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0N2P0 | 11 | Upper Island/Central Coast | 724 | Gwa'Sala-Nakwaxda'xw | Kwakiutl District Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V9W5W8 | 11 | Upper Island/Central Coast | 622 | Campbell River | Kwakiutl District Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0P1G0 | 11 | Upper Island/Central Coast | 630 | Mowachaht/Muchalaht | Nuu-Chah-Nulth Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0P1K0 | 11 | Upper Island/Central Coast | 553 | Klahoose First Nation | Alliance Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0N2P0 | 11 | Upper Island/Central Coast | 541 | Oweekeno | Oweekeno/Kitasoo/Nuxalk Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0P1N0 | 11 | Upper Island/Central Coast | 623 | Cape Mudge | Kwakiutl District Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0P1S0 | 11 | Upper Island/Central Coast | 625 | Kwicksutaineuk-ah-kwaw-ah-mish | Musgamagw Tsawataineuk Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0N2P0 | 11 | Upper Island/Central Coast | 626 | Kwakiutl | Kwakiutl District Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V0N2R0 | 11 | Upper Island/Central Coast | 627 | Gwawaenuk Tribe | Musgamagw Tsawataineuk Tribal Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V9W2E3 | 11 | Upper Island/Central Coast | 628 | Kwiakah | Kwakiutl District Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V9W2E4 | 11 | Upper Island/Central Coast | 629 | Mamalilikulla-Qwe'Qwa'Sot'Em | Kwakiutl District Council |
| 04 | Vancouver Island | 43 | North Vancouver Island | V9H1G5 | 11 | Upper Island/Central Coast | 552 | Homalco | Alliance Tribal Council |
| 05 | Northern | 51 | Northwest | V0J1X0 | 13 | North West | 678 | Nisga'a Village of Laxgalt'sap | Nisga'a Tribal Council |
| 05 | Northern | 51 | Northwest | V0V1H0 | 13 | North West | 674 | Lax-kw'alaams | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V0V1A0 | 13 | North West | 675 | Hartley Bay | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V0T2B0 | 13 | North West | 676 | Kitamaat | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V0J1A0 | 13 | North West | 677 | Nisga'a Village of New Aiyansh | Nisga'a Tribal Council |
| 05 | Northern | 51 | Northwest | V0J3T0 | 13 | North West | 679 | Nisga'a Village of Gitwinksihlkw | Nisga'a Tribal Council |
| 05 | Northern | 51 | Northwest | V8G4B5 | 13 | North West | 681 | Kitsumkalum | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V8J3R2 | 13 | North West | 673 | Metlakatla | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V0J1K0 | 13 | North West | 683 | Iskut | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V8G3X6 | 13 | North West | 680 | Kitselas | Unaffiliated Bands |

# Appendix F • Indian Bands by Health Authority, Health Service Delivery Area and Health Region

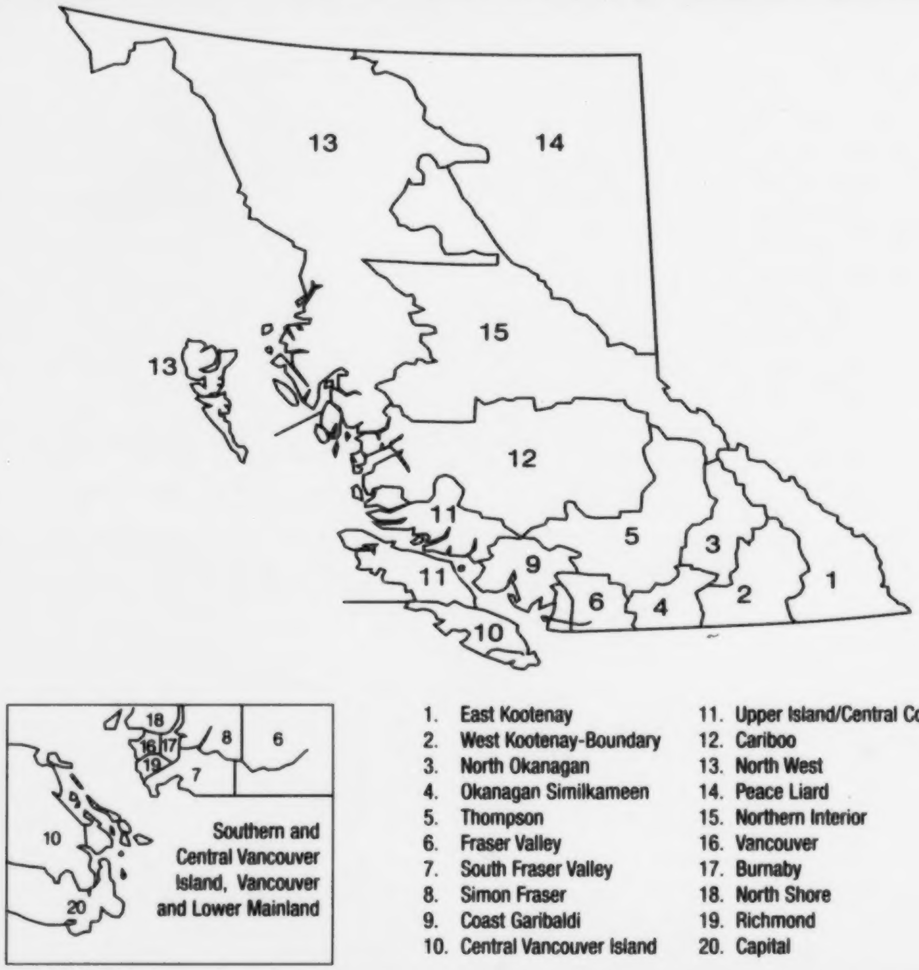
| HA | Health Authority | HSDA | Health Service Delivery Area | Postal Code | HR | Health Region | INAC Band | Band Name | Affiliation |
|---|---|---|---|---|---|---|---|---|---|
| 05 | Northern | 51 | Northwest | V0J2N0 | 13 | North West | 530 | Moricetown | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V0J2J0 | 13 | North West | 534 | Hagwilget Village | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V0V1C0 | 13 | North West | 672 | Kitkatla | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V0J2W0 | 13 | North West | 682 | Tahltan | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V0J1Y0 | 13 | North West | 533 | Glen Vowell | Gitksan-Wet-Suwet'en Government Council |
| 05 | Northern | 51 | Northwest | V0J1Y0 | 13 | North West | 531 | Gitanmaax | Gitksan-Wet-Suwet'en Government Council |
| 05 | Northern | 51 | Northwest | V0J2R0 | 13 | North West | 535 | Gitsegukla | Unaffiliated Bands |
| 05 | Northern | 51 | Northwest | V0J2A0 | 13 | North West | 536 | Gitwangak | Gitksan-Wet-Suwet'en Government Council |
| 05 | Northern | 51 | Northwest | V0J2A0 | 13 | North West | 537 | Gitanyow | Gitksan-Wet-Suwet'en Government Council |
| 05 | Northern | 51 | Northwest | V0T1M0 | 13 | North West | 669 | Old Massett Village Council | Haida Tribal Society |
| 05 | Northern | 51 | Northwest | V0T1S1 | 13 | North West | 670 | Skidegate | Haida Tribal Society |
| 05 | Northern | 51 | Northwest | V0V1B0 | 13 | North West | 671 | Nisga'a Village of Gingolx | Nisga'a Tribal Council |
| 05 | Northern | 51 | Northwest | V0J1Y0 | 13 | North West | 532 | Kispiox | Gitksan-Wet-Suwet'en Government Council |
| 05 | Northern | 52 | Northern Interior | V0J1E0 | 15 | Northern Interior | 725 | Wet'suwet'en First Nation | Carrier Sekani Tribal Council |
| 05 | Northern | 52 | Northern Interior | V0J2G0 | 15 | Northern Interior | 618 | McLeod Lake | Unaffiliated Bands |
| 05 | Northern | 52 | Northern Interior | V0J1E0 | 15 | Northern Interior | 619 | Burns Lake | Carrier Sekani Tribal Council |
| 05 | Northern | 52 | Northern Interior | V0J1E0 | 15 | Northern Interior | 620 | Cheslatta Carrier Nation | Unaffiliated Bands |
| 05 | Northern | 52 | Northern Interior | V0J1E0 | 15 | Northern Interior | 726 | Nee-Tahi-Buhn | Unaffiliated Bands |
| 05 | Northern | 52 | Northern Interior | V0J2P0 | 15 | Northern Interior | 729 | Skin Tyee | Unaffiliated Bands |
| 05 | Northern | 52 | Northern Interior | V2L5S4 | 15 | Northern Interior | 728 | Yekooche | Unaffiliated Bands |
| 05 | Northern | 52 | Northern Interior | V0J1P0 | 15 | Northern Interior | 617 | Tl'azt'en Nation | Carrier Sekani Tribal Council |
| 05 | Northern | 52 | Northern Interior | V2J3H6 | 12 | Cariboo | 709 | Alexandria | Ts'ilhqot'in National Government |
| 05 | Northern | 52 | Northern Interior | V0J1N0 | 15 | Northern Interior | 612 | Nadleh Whuten | Carrier Sekani Tribal Council |
| 05 | Northern | 52 | Northern Interior | V2K5G5 | 15 | Northern Interior | 611 | Lheidli T'enneh | Unaffiliated Bands |
| 05 | Northern | 52 | Northern Interior | V2J3P7 | 12 | Cariboo | 720 | Nazko | Carrier Chilcotin Tribal Council |
| 05 | Northern | 52 | Northern Interior | V0J1S0 | 15 | Northern Interior | 613 | Stellat'en First Nation | Carrier Sekani Tribal Council |
| 05 | Northern | 52 | Northern Interior | V2L3H1 | 15 | Northern Interior | 610 | Kwadacha | Unaffiliated Bands |
| 05 | Northern | 52 | Northern Interior | V2L2Y8 | 15 | Northern Interior | 609 | Tsay Keh Dene | Unaffiliated Bands |
| 05 | Northern | 52 | Northern Interior | V2L3N2 | 15 | Northern Interior | 608 | Takla Lake First Nation | Carrier Sekani Tribal Council |
| 05 | Northern | 52 | Northern Interior | V0J1E0 | 15 | Northern Interior | 607 | Lake Babine Nation | Unaffiliated Bands |
| 05 | Northern | 52 | Northern Interior | V2J3J8 | 12 | Cariboo | 721 | Kluskus | Carrier Chilcotin Tribal Council |
| 05 | Northern | 52 | Northern Interior | V0J3A0 | 15 | Northern Interior | 615 | Saik'uz First Nation | Carrier Sekani Tribal Council |
| 05 | Northern | 52 | Northern Interior | V0J1P0 | 15 | Northern Interior | 614 | Nak'azdli | Carrier Sekani Tribal Council |
| 05 | Northern | 52 | Northern Interior | V2J3J9 | 12 | Cariboo | 715 | Red Bluff | Carrier Chilcotin Tribal Council |
| 05 | Northern | 53 | Northeast | V1J1Y7 | 14 | Peace Liard | 547 | Blueberry River First Nations | Treaty 8 Tribal Association |
| 05 | Northern | 53 | Northeast | V0C2N0 | 14 | Peace Liard | 546 | Halfway River First Nation | Treaty 8 Tribal Association |
| 05 | Northern | 53 | Northeast | V0C1X0 | 14 | Peace Liard | 545 | West Moberly First Nations | Unaffiliated Bands |
| 05 | Northern | 53 | Northeast | V0C1R0 | 14 | Peace Liard | 544 | Prophet River Band, Dene Tsaa Tse K'Nai First Nation | Treaty 8 Tribal Association |
| 05 | Northern | 53 | Northeast | V0C2H0 | 14 | Peace Liard | 548 | Doig River | Treaty 8 Tribal Association |
| 05 | Northern | 53 | Northeast | V0C1X0 | 14 | Peace Liard | 542 | Saulteau First Nations | Treaty 8 Tribal Association |
| 05 | Northern | 53 | Northeast | V0C1R0 | 14 | Peace Liard | 543 | Fort Nelson First Nation | Unaffiliated Bands |

Sources:
New Directions and Aboriginal Peoples in British Columbia: Overview of Indian Bands, Tribal Affiliations, Aboriginal Organizations, and New Directions in Health. Aboriginal Health Policy Branch, B.C. Ministry of Health and Ministry Responsible for Seniors, 1995
First Nations Profiles. Indian and Northern Affairs Canada.

# Appendix G
# Maps of Health Regions and Health Service Delivery Areas

Under British Columbia's new governance structure, introduced in December 2001, regional health services are managed and governed by five health authorities: Interior, Vancouver Island, Northern, Fraser, and Vancouver Coastal. Over time, health information systems will be modified to reflect the boundaries of the new health authorities and their service delivery areas. At the time this report was prepared, however, most information systems produced data based on 20 health analysis areas known as "health regions." The 20 regions are identical to those used in previous Provincial Health Officer's annual reports and in the 2001 Vital Statistics report *Regional Analysis of Health Statistics for Status Indians in British Columbia 1991-1999: Birth Related and Mortality Summaries for British Columbia and 20 Health Regions.*

## British Columbia Health Regions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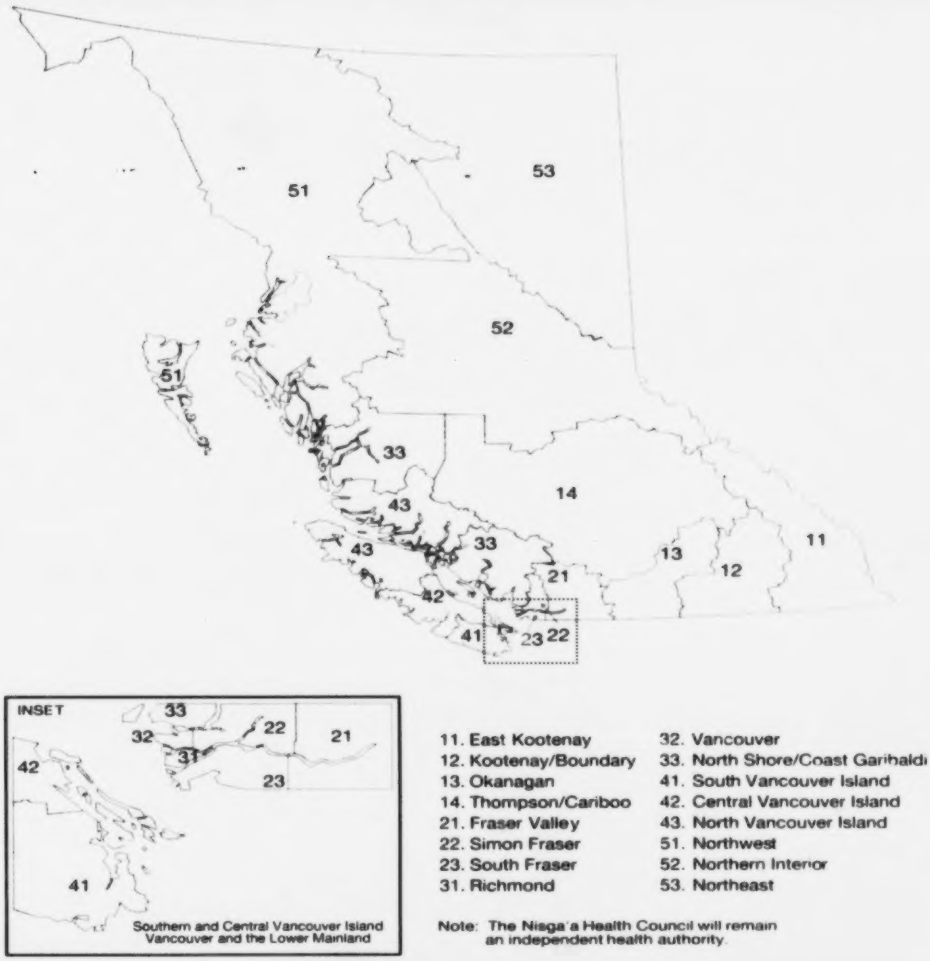
Southern and Central Vancouver Island, Vancouver and Lower Mainland

1. East Kootenay
2. West Kootenay-Boundary
3. North Okanagan
4. Okanagan Similkameen
5. Thompson
6. Fraser Valley
7. South Fraser Valley
8. Simon Fraser
9. Coast Garibaldi
10. Central Vancouver Island
11. Upper Island/Central Coast
12. Cariboo
13. North West
14. Peace Liard
15. Northern Interior
16. Vancouver
17. Burnaby
18. North Shore
19. Richmond
20. Capital

Prepared by: Health Information Access Centre, Ministry of Health Services
Boundry Source: BC STATS, Ministry of Management Services

## British Columbia Health Services Delivery Areas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Southern and Central Vancouver Island
Vancouver and the Lower Mainland

11. East Kootenay
12. Kootenay/Boundary
13. Okanagan
14. Thompson/Cariboo
21. Fraser Valley
22. Simon Fraser
23. South Fraser
31. Richmond
32. Vancouver
33. North Shore/Coast Garibaldi
41. South Vancouver Island
42. Central Vancouver Island
43. North Vancouver Island
51. Northwest
52. Northern Interior
53. Northeast

Note: The Nisga'a Health Council will remain an independent health authority.

Prepared by: Health Information Access Centre, Ministry of Health Services
Boundry Source: BC STATS, Ministry of Management Services

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